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MORE JOINT TRAINING WITH SOVIET FORCES PLANNED

East Berlin MILITAERWESEN in German Sep 84 pp 3-9

[Article by Col. Gen. H. Kessler, deputy minister for national defense and Chief, Political Main Administration of the NVA: "The German Democratic Republic--Firm Component Part of the Socialist Defense Coalition"]

[Text] With the birth of the GDR, the first socialist state of workers and peasants on German soil, Europe's political face changed. On this 7 October 1949 "a new chapter in the history of our people and in the history of our continent was ushered in."[1]

Four years before that the chains were broken by blows of the Soviet Army and its allies that held our people, too, in bondage after 12 years of Nazi rule and until then bloodiest war unleashed by German imperialism. Thus we were given the opportunity to start anew, to break with all reactionaries in the past of our people and thus at the same time prove ourselves worthy of the sacrifices of the liberators and of the historical responsibility. In October 1950 the first GDR president, Wilhelm Pieck, wrote: "It was important how the German working class would fulfill its historical mission this time. It was important whether the masses of the workers and peasants would know this time how to make history. The founding of the GDR is proof that the working class in this part of Germany successfully fulfills its historical mission."[2]

Three and a half decades of embittered struggle, hard work, some developmental problems and finally impressive victories confirm these words sustained by invincible optimism. Under the leadership of their revolutionary Marxist-Leninist vanguard, the workers and peasants, all other working people of our country indeed have made history--their history, in which effort by millions made a reality of the things generations had dreamt, for which they had fought.

Desire for Peace, Core of Our State Doctrine

Since its first day, the GDR embodies the desire for peace of our people, a desire that had always been scoffed at, misused, gagged and trampled underfoot by the ruling exploiter classes. Since October 1949 this desire for peace has become the core of our state doctrine, for never again must a war be permitted to start from German soil. "We want not only peace for our and your generation," the general secretary of the SED Central Committee and chairman of the GDR State Council, Erich Honecker, exclaimed to the participants in the opening ceremonies of the 1984 Pentecost National Youth Festival in Berlin. "We want peace for our children and grandchildren. We want peace for all times, forever."[3]

History teaches that wishing alone is not enough. The world is changed by deeds. Peace needs a home which it has found in socialism. It needs people who preserve and guard it. As a result and consistently, an army was therefore created in the GDR as an instrument for the protection of the worker-and-peasant power, an army whose foremost goals consist in the defense of the socialist fatherland and in safeguarding peace. This task corresponds to the foremost vital interests of all working people. It is being fulfilled by the NVA shoulder to shoulder with the Soviet armed forces and the other armies of the Warsaw Pact member states.

When most citizens of our republic no longer had to become acquainted with the horrors of wars from their own experience because the most aggressive forces of imperialism since the destruction of Hitler fascism now almost 40 years ago have been forced by the peace-maintaining all-around strength of socialism to renounce military adventures in Europe, they also owe thanks for that to the creation and strengthening of the GDR as a bulwark of peace and to its socialist armed forces. In the 35 years of development and growth of the GDR there have been repeated attempts to stop our revolutionary advance at the side of the Soviet Union and of the other fraternal socialist countries, to repel the victorious working class and its allies, to destroy the new social order and to reestablish the old imperialist rule. The class enemy has attacked us from the outside and at the same time has tried to undermine the foundations of our state from the inside. He gave us no respite, well knowing that a politically, economically and militarily stable, unshakable socialist German state in the heart of Europe, which is inextricably anchored in the fraternal alliance of the socialist countries, sets an insurmountable limit to the power of imperialism and its aggressiveness.

From the Mecklenburg Bay to the western heights of the Thuringian Forest, there runs not only the border between two German states but also the dividing line of two worlds. Here parts the old world in which the laws of capital, the striving for profit of the monopolies prevail, whose most aggressive forces prepare for war against socialism with unbridled rearmament from that part of the world in which even now emerge the outlines of a global future community of peace-loving socialist peoples linked in friendship, in which the roots of war have been eradicated once and for all.

Imperialist Overarmament Against Socialism

But peace, which is being successfully defended by the Soviet Union, the GDR, the other states of the socialist community and all forces of peace in the world, is still threatened to the extreme. Almost every week U.S. President Reagan asks for millions and millions upon millions of dollars for expanded and new armament programs. In the service of U.S. monopolies whose overarmament course brings superprofits, closely linked with the leading forces in the Pentagon, he accelerates development and production of intercontinental missiles and strategic bombers, of new submarine and surface warships, of the latest conventional weapons systems with destruction factors close to those of nuclear weapons. U.S. pressure on the European NATO partners becomes stronger to induce them to increase their armament expenditures without regard for the crisis-shaken economy and the situation of the working people. Despite many warning voices, even from his own camp, Reagan expands the arms race to space. The plans for the creation of a cosmic weapons system echeloned in depth comprise the entire range from antisatellite weapons via laser battle stations in space to an ingenious radar security system.

An extraordinary threat results for the Soviet Union, the GDR and the other socialist states from the stationing of "Pershing 2" U.S. intermediate range missiles in the FRG that has started in the meantime. Preparations for the installation of cruise missiles in the FRG, Great Britain, Italy, Belgium and Ther Netherlands are in full swing. Range, shorter flight time and high accuracy characterize especially the "Pershing 2" as the weapon for the first strike planned by the NATO military. The former director for nuclear weapons in the U.S. Department of Defense, Maj Gen Niles J. Fulwyler, declared in this connection: "The Pershing II provides us with the possibility to hit a number of critical targets in the Western military district of the Soviet Union which we were unable to reach until now."[4]

The overarmament of the United States and of NATO as a whole is accompanied by stepped-up economic warfare against the socialist states and an unbridled ideological diversion exceeding everything in the past as regards lies and slander and factual blocking of all international negotiations on steps towards arms limitation and disarmament and on confidence-building measures to reduce the danger of the outbreak of a nuclear war, respectively. The numerous constructive proposals of the Soviet Union and its fraternal countries as a rule meet with immediate open rejection or they are blocked by unacceptable U.S. conditions.

Europe has always played the dominant role in the strategic plans of the Pentagon and of NATO. This fact had to be taken into account and must continue to be taken into account in the future in the GDR military policy with constant political and military vigilance and appropriate steps to perfect national defense. The NATO main forces are stationed in Western

Europe. Since its founding, the GDR is a direct neighbor to the FRG, a state that, beginning with the remilitarization until up to the 1979 Brussels missile decision was built up into a base of imperialism bristling with weapons with the highest troop concentration in Western Europe. All past FRG governments are coresponsible for this development, which also led to the fact that roughly 6000 U.S. nuclear warheads are stored on West German territory and that the population has become hostage to a mad nuclear war strategy. This development is continued by the present CDU/CSU/FDP coalition under Chancellor Kohl with new features and at a higher rate. Differences in economic questions and reservations regarding the rates of increase of the armament budget demanded by the United States do not affect the foreign and military-policy conformance of the Bonn government with the confrontation course of the U.S. Administration. The vassal's loyalty to the United States is based on the embittered hatred for socialism as a social system, on unbridled anticommunism, anti-Sovietism and revanchism, on the implacable enmity of the most aggressive circles of FRG imperialism towards the GDR. The character of the Bundeswehr, whose task as a main force of the NATO armed forces in Europe is not defense but preparation for war, for aggression, also corresponds to this mentality.

The opinion of this army becomes evident simply from its alliance with the U.S. armed forces whose crimes and acts of violence, whose merciless suppression of every progressive movement has left indelible bloody traces in many countries. In both armies the soldier is being trained in the spirit of militarism and anticommunism and educated in the spirit of blind hatred towards the Soviet Union, the German Democratic Republic and the other socialist states. Both armies possess a high military-technical potential for aggression that is being increased step by step with new weapons generations according to the plans of the Pentagon, the NATO generals, the NATO Europe group and the FRG government. Thus the FRG 1984 state budget of DM 257.1 billion provides roughly DM 70 billion for armament and other military purposes. While, e.g., for the fields of youth, family, health, education and science a total of merely DM 20.5 billion is shown, DM 21 billion is available for military procurement and installations alone.

Dangerous But Illusionary Plans

If the plans of the United States and its NATO partners, which were again discussed in detail during the latest conference series of the leadership bodies of the pact in April and May 1984, are analyzed, then the clear orientation on the stepped-up continuation of the course of confrontation and overarmament is evident. With the achievement of clear military superiority in the area of nuclear as well as conventional weapons and of command, reconnaissance and security technology, NATO wants to obtain the capability to instigate all kinds of aggressions and to conclude them successfully. Core of these efforts is the development of the potentials for an unpunished first strike with nuclear weapons first strike that would destroy socialism.

As little as the dangers of such ambitions and the possibilities of their achievement by imperialism must be underestimated, just as little should the illusionary part of these goals be overlooked. The USSR and its fraternal countries today more than ever possess everything that is necessary to wreck the crusade plans of the most aggressive groupings of international monopoly capital.

In this sense the general secretary of the CPSU Central Committee and chairman of the Presidium of the USSR Supreme Soviet, Konstantin Chernenko, and the general secretary of the SED Central Committee and chairman of the GDR State Council, Erich Honecker, during their meeting on 14 June 1984 emphasized the determination of our fraternally allied states to decisively rebuff the machinations of the enemies of peace and of international cooperation in the future, too. We are not going to permit the most aggressive forces of NATO, especially the United States, to upset the peace-maintaining approximate military-strategic balance in their favor.[5]

This should be taken seriously. The statement of the leading representatives of the Soviet Union and of our country is based on the political, economic, scientific-technical, cultural and military strength of the Soviet Union and of all states of the socialist community. The achievements of the Socialist Unity Party of Germany, of the working class and all working people of the German Democratic Republic in the course of the three and one half decades since the founding of our worker-and-peasant state have been merged into the united strength of the socialist fraternal alliance.

In Firm Alliance With the USSR and the Other Fraternal Countries

From the beginning the GDR grew stronger as an integral part of the developing socialist world system in full conformance with the laws of the development of our era. Under the leadership of the Socialist Unity Party of Germany the working class allied with the cooperative peasants and all other working strata of our people step-by-step created the socialist social order. Provided with the ideas of Marx, Engels and Lenin and the experiences of decades of class struggle against German imperialism and militarism, they caused fundamental revolutionary changes which mark the progress of the revolutionary world process on German soil, too.

The establishment of the German Democratic Republic as a state of the workers and peasants was the irrevocable decision of our people in favor of democracy, socialism and peace. It was the deciding step of the entry into the family of the fraternally allied socialist peoples. It was tantamount to a high pledge made before the entire world to bring the growing weight of our young state to bear on the international balance of forces at the side of social progress in firm alliance with the Soviet Union and the other fraternal countries. Integrated in the socialist community and thus on the side of the victors of history, our republic, owing to the unselfish internationalist assistance by the Soviet Union, has become a cornerstone of peace in Europe in the struggles of our time.

The fact that peace is also in good hands with the members of the NVA was also confirmed by the general secretary of the SED Central Committee, Erich Honecker during his troop visit with the ground forces in June 1984: "The defensive efforts of socialism, including the jointly coordinated military countermeasures, create such combat effectiveness and battle readiness of the forces and staffs of the United Armed Forces of the Warsaw Pact that any aggression against socialism will inevitably lead to a fatal risk for imperialism."[6]

Contribution to the Collective Defense Strength of Socialism

The contribution of the NVA to the collective defensive strength of socialism is the result of the military policy of the Socialist Unity Party of Germany and of our socialist state oriented from the start on the formation of a socialist coalition army. The party of the working class in the solution of themilitary question has creatively applied the Marxist-Leninist theory and the CPSU experiences in the creation and development of the Soviet armed forces under the concrete historical conditions of the socialist development in the GDR. It has unwaveringly been guided by the concept that the protection of the revolutionary achievements and peaceful conditions for each individual socialist country can be guaranteed only by joint action with the Soviet Union, by the preservation of peace for the entire community of states, indeed for all peoples.

This recognition emerges more compellingly than ever now and in the future from the international combat conditions. In the further deepening of the comradeship-in-arms, this recognition makes it necessary to seek, to follow more effective ways in the further deepening of the comradeship in arms and to convert these relations more and more effectively into a really measurable growth in combat effectiveness and battle readiness. The historical experiences of the GDR and its armed forces substantiate the demand of the 13th Delegate's Conference of the Party Organizations of the SED in the NVA and in the Border Troops of the GDR to the commanders, political organs, party and FDJ organizations to strengthen the collective sense of responsibility for the defense of socialism with the entire multiplicity of the comradeship-in-arms relations. It is important to strengthen the conviction of all military personnel about the invincibility of the socialist military coalition by their own experience and to raise the combat effectiveness of the United Armed Forces by the coordination of the command organs and the forces in theoretical work as well as in practical combat training. Joint training measures with units, forces, and comrades of the GSFG, performance comparisons, systematic exchange of experiences and especially force and command staff exercises provide strong impetus to the socialist class brotherhood and comradeship-in-arms in the struggle for military maximum performance. The "YUG-84" exercise developed significant new findings for the qualification of the commanders and command organs as well as for combat training. As outstanding training measure in the first training half year 1983-84, it corresponded to the character of modern combat actions and made highest demands on the leadership capability of the superiors, on the tactical knowledge of the soldiers and on the mastery of all other branches of combat training. In the jubilee year of the GDR, the exercise demonstrated the high level of coordination among the Soviet army, the Polish army and the NVA.

A feature of the revolutionary changes in thinking and action of our people since the moving October days of 1949 is the fact proven thousandfold in life that the solidarity of the working people with their armed forces also includes the fraternal armies. This is most clearly reflected in the love and care which is shown to the GSFG members by our working people. During the week of the 1984 Comradeship-in-Arms alone, nearly 1.5 million citizens of our country, especially youths, participated in joint events with the Soviet army and the NVA. This demonstrates that the inseparable unity of socialist patriotism and proletarian internationalism, the determination for collective defense of socialism and peace are deeply rooted in our people.

In this spirit the members of the NVA and of the GDR Border Troops have prepared themselves with exemplary achievements for the 35th birthday of our socialist state in fulfilling the class mission assigned by the Tenth Party Congress of the Socialist Unity Party of Germany. In this connection our thoughts are already rushing ahead to 1985, in which we can observe the 40th anniversary of the liberation of our people from Hitler barbarism. The red victory banner with hammer and sickle on top of the Reichstag building in Berlin marks the beginning of the road that we have followed under the leadership of our battle-tested Marxist-Leninist party and in the unswerving alliance with the Soviet Union and the other fraternal countries, which led to the founding of our worker-and-peasant state and its superb balance sheet for 1984. The 35th anniversary of the GDR, high point of the thus far most successful year in the history of our republic, will permit us to tackle with pride and confidence in victory the further tasks which must be mastered in the future for the benefit of the people, for the strengthening of the socialist fraternal alliance and thus for the maintenance of peace.

FOOTNOTES

1. "Appeal on the Occasion of the 35th Anniversary of the Founding of the German Democratic Republic." In: NEUES DEUTSCHLAND, Berlin, B edition, 21/22 Jan 84.

2. W. Pieck, "Speeches and Articles," Vol II, Berlin 1952, p 565.

3. E. Honecker, "Speech at the Opening Ceremony of the 1984 National Youth Festival," In: NEUES DEUTSCHLAND, 9/10 Jun 84.

4. Quoted according to: STERN, Hamburg, No. 52/1983, p 114.

5. See NEUES DEUTSCHLAND, 15 Jun 84.

6. E. Honecker, "Address at the Meeting on the Occasion of the Visit to the Troops on 21 Jun 84, In: Ibid., 22 Jun 84.

INTENSIFICATION OF COMBAT MORALE URGED

East Berlin MILITAERWESEN in German Sep 84 pp 25-28

[Article by Col. Dr. R. Riecke, 'Wilhelm Pieck' Military-Political College: "A Willingness for Combat and Confidence in Victory--Component Parts of an Active Way of Life for Army Members"]

[Text] We look back with pride on 35 years of development and growth of the GDR. In this historically short time the working people of our country have fulfilled tasks of historical significance. What strikes us in this look back is the optimism, the confidence and the devotion with which the people in all fields of social life have fought for the achievement of the set goals. An important prerequisite for that was and is the prudent and farsighted leadership by the Socialist Unity Party of Germany. It has always helped the working people to find the correct rational and emotional relationship to the policy; it provided them in time with the required political orientations and organized and mobilized them for the exemplary fulfillment of the tasks.

Thirty-five years of the German Democratic Republic at the same time are proof that the citizens of our country, defying all hostility and difficulties, demonstrated that they measure up to the demands. This gives us the assurance that we are also going to master the present and future tasks with which we are faced in the further shaping of the developed socialist society in the GDR. In this connection we are aware that the new combat conditions demand from each individual a greater measure of readiness, capability and will to fight. This applies especially to the fulfillment of our two fundamental obligations in the struggle for peace which were stressed by the Eighth Plenum of the SED Central Committee: "Side by side with the Soviet Union, its glorious army, the other states and armies of the Warsaw Pact to see to the preservation of the military-strategic balance and the defense preparedness of our socialist military coalition and to direct our coordinated peace policy, the combination of the fraternal parties of our countries towards winning over and bringing together all forces that can politically defeat the confrontation and overarmament course of the United States and of NATO and can bring about a change for the better in the world-political development."[1]

Every citizen of our country is asked to make his contribution to the strengthening and the protection of peace and socialism--be it at his workbench, on the tractor, at the drawing board or in the tank. For peace is and will remain the state doctrine of our country, as comrade Erich Honecker expressed it during his visit to the NVA ground forces. "To love peace, to work for peace, to defend peace--that is the determining factor in thought and action of the people of the GDR and its soldiers."[2]

To Want to and Be Able to Fight and Be Victorious

In his speech during the visit to the troops Comrade Honecker again made clear the great responsibility of the socialist armed forces for the safeguarding of peace and he awakened awareness that the tasks to be solved in this connection constitute a challenge for each individual. In final analysis, what is involved is that the soldiers, NCOs, warrant officers and officers making use of all their knowledge and ability to ensure every day such combat effectiveness and readiness that any aggression against socialism will inevitably become a fatal risk for imperialism. It must be our goal in education and training to achieve that the military personnel "want to and will be able to fight and be victorious if we are forced to that."[3]

The characteristics that must be stressed and deepened include especially the will to fight and confidence in victory. They express the desire of the military personnel to resolutely fight and destroy an aggressor using all their physical and mental strength and their conviction of the invincibility of socialism. Both characteristics are indispensable to provide a crushing defeat to the imperialist aggressor in case of war.

But the will to fight and the confidence in victory are required not merely in armed combat. The soldier needs them even now. Only then are we going to be able to fulfill the tasks assigned to the armed forces to demonstrate again and again by high combat effectiveness and readiness to the aggressor against socialism that he cannot hope for victory in any kind of war.[4] To fulfill in an exemplary manner all tasks in political and military training, in combat and border service as well as in the ready-alert system, to follow new paths in the intensification of education, training and research, in doing so not to capitulate to obstacles and difficulties but to overcome them purposefully--these and other demands are made on individual warrior qualities, on the will to fight. And here, too, the commitment and the results will be greater the more the comrades are approaching the solution of the qualitatively and quantitatively growing tasks with an optimistic basic attitude, the more convinced they are that the forces of peace and socialism will succeed in frustrating the crusade strategy of the most aggressive imperialist circles. And in this sense, the will to fight and the confidence in victory are to be regarded as integral parts of an active mental attitude of the military personnel.

Nature, Features, and Components of an Active Mental Attitude of the Socialist Soldier Personality

By its nature the active mental attitude is a complex of moral-ideological attitudes and relations as well as of knowledge and capabilities conditioned by concrete social circumstances which stimulate the soldier to exemplary military action in conformance with the convictions that he has gained. To put it another way, the mental attitude of the soldier is the concentrated expression of his ideological views, political-moral and professional qualities as well as his most important needs.

The active mental attitude of a socialist soldier personality is characterized by features such as the following:

—Marxist-Leninist orientation,

—predominance of socially and collectively significant motivations for action and behavior,

—constant readiness for action for the strengthening of the armed forces on the basis of high social responsibility and a conscious attitude towards fulfillment of the military duty,

—integrity and consistency of the awareness which ensure the unity of knowledge, conviction and behavior, of word and deed, of intention and action in the struggle for a constantly high combat readiness,

—irreconcilability toward the bourgeois ideology and morality, political indifference, petit bourgeois and egotistical thinking and action.

Structurally the mental attitude consists of three mutually influencing components:

1. The normatively valuing component which includes knowledge of values and norms, convictions and ideological attitudes,

2. the motivating-causal one whose most important elements constitute the needs, goals, interests and ideals, and

3. the practical-active one which includes readiness for action, the knowledge of subject matter and process, the abilities, skills, habits and characteristics of will.[5]

Development and Strengthening of an Active Mental Attitude

To be able to attain an active mental attitude, taking into account the above statements, presupposes that

the soldier firmly adopts the Marxist-Leninist ideology;

has confidence in the policy of the party of the working class and is loyally devoted to the communist ideals;

is convinced that socialism is worth defending, that it must be defended against imperialism and that it can be successfully defended;

possesses the required military knowledge and skill as well as a high physical and mental stability to be able to translate his plans and intentions into deeds.

Development of an active mental attitude of the military personnel, including their will to fight and their confidence in victory, therefore is the process in the course of which the personality of the soldiers, their best moral qualities, in the first place their social activity, are perfected in the military activity based on the Marxist-Leninist ideology. This process is socially determined and because of the influence of numerous objective and subjective factors--the specifics of the tasks, the conditions of the activity, the military collective concerned, the leadership behavior of the superiors, the status of development of the soldier, his individual special qualities and many others--is very complex and self-contradictory.

The primacy in the development of an active mental attitude--according to its structure--belongs to the ideological strengthening in the course of an effective political-moral preparation. What is decisive in this connection is the transformation of ideological-moral knowledge into deep personal convictions. In that we are most likely to succeed if in education work it is always taken into account that conviction is theoretically deeply understood, emotionally charged knowledge pervaded by efforts of will. Accordingly, convictions are formed only in mental and practical activity, in all-around thinking-through and assessing of what has been learned, in confronting new knowledge and experiences gathered as well as attitudes already developed.

Thus effective political-ideological education cannot be reduced to skillful explaining and proving but also comprises correct organizing of service and socio-political activity of the military personnel including the ability to overcome difficulties in this connection and to passionately pursue the goal to be attained, i.e. to prove their will to fight. In other words, the active mental attitude of the military personnel, their will to fight, their confidence in victory are strengthened in daily striving for a high level of fulfillment of the service duties.

This process is stimulated by

--a highly organized nature of the military service and the maintenance of a strict order according to the regulations,

--maximum combat-like conditions of training to enable the military personnel to exemplarily fulfill their functional duties despite high physical and mental stresses;

--purposeful utilization of socialist competition to develop initiative and creativeness of the military personnel,

--qualifying the military personnel for independent and rational acquisition of new knowledge, etc.

In summary the following can be stated: The active mental attitude is an indispensable subjective prerequisite for high combat readiness. It can be developed and strengthened only in politically ideologically motivated day by day struggle for it, in which the soldier acquires the necessary combat reliability. Without it confidence in victory is unthinkable.

To strengthen the will to fight and the confidence in victory as integral parts of an active mental attitude of the military personnel requires of the superiors and functionaries

--complex organization and structuring of education and training utilizing all potentials,

--purposeful influence on the military personnel in all areas of military life and

--proceeding in a uniform, coordinated and continuous manner and always acting as a model.

FOOTNOTES

1. "From the Report of the Politburo to the Eighth Plenum of the SED Central Committee. Rapporteur: Comrade Kurt Hager," Berlin 1984, p 7.

2. E. Honecker, "To Love Peace, to Work for Peace, to Defend Peace," In: NEUES DEUTSCHLAND, Berlin, B edition, 22 Jun 84.

3. "From the Report of the Secretariat of the Political Main Administration to the 13th Delegate Conference of the Party Organizations of the SED in the NVA and the GDR Border Troops. Rapporteur: Col Gen Heinz Kessler." In: PARTEIARBEITER, special issue, Mar 84, p 29.

4. See H. Hoffmann, "All Effort for the Protection of Socialism and Peace." In: NEUES DEUTSCHLAND, 25 Nov 83.

5. See A. Barabanshtshikov, "Development of an Active Mental Attitude Among the Military Personnel." In: MILITAERWESEN, No 9/1981, p 18.

MARXIST-LENINIST MILITARY SCIENCE OUTLINED

East Berlin MILITAERWESEN in German Sep 84 pp 38-44; Oct 84 pp 28-34

[Article by Col. Dr. E. Jakob, military scientist, and Col. Dr. K. Kulisch, both of the 'Friedrich Engels' Military Academy: "Substance and Structure of Marxist-Leninist Military Science"]

[Text] Marxist-Leninist military science occupies an important position in the system of knowledge on war and the armed forces. It researches especially the specifics of war, armed combat, and imparts findings to the socialist armed forces that constantly improve their ability to fulfill their responsible tasks for the protection of peace and the achievements of socialism.

National liberation movements and young national states which embark on the path of socialist development also use the military-theoretical principles of the Marxist-Leninist military science, which is constantly being further developed by the unified efforts of the Warsaw Pact countries and armies. Its importance for the defense capability of socialism and for the safeguarding of world peace constantly grows. There are at least two significant causes for that:

First. To frustrate the adventurous imperialist course of total confrontation and accelerated overarmament, military science has to make a growing contribution to the maintenance of the military-strategic balance, to the preservation of the military power of the Warsaw Pact states under all conditions. This contribution above all consists in scientifically determining the outlines of a possible war unleashed by imperialism, in predicting its character, the conditions of its development, variants of its outbreak and the methods of warfare and in developing appropriate models of modern combat actions.

Second. The influence of scientific-technical progress incessantly increases. The different generations of arms and equipment succeed one another at a rapid rate. New kinds of weapons and other military technology change the character of combat actions. Scientific headstart is imperative to master new military technology effectively and in time, to safeguard its combat mission and to raise the quality of training. It is also important to perfect the structures of the unit, to develop new forms and methods of preparation and execution of combat actions, of the command of force groupings in the coalition context, and to solve tasks of protection against weapons of mass destruction, etc.

These and other responsible tasks can be fulfilled only if there is clarity on subject and structure of Marxist-Leninist military science and all its inherent possibilities are comprehensively developed and utilized.

On the Subject of Marxist-Leninist Science

Military science is a "system of knowledge on the character and the laws of war, the preparation of the armed forces and of the country for war and the methods of warfare."[1]

This definition makes it evident that the subject of the Marxist-Leninist military science can only be correctly determined if the nature of war is understood. This concerns especially the finding that war is a political phenomenon. Its objective economic basis and cause is private property in the means of production. However, private property does not produce war directly, immediately but by the fact that it creates class interest in war. This is expressed in the war policy. Accordingly, war has objective social causes, however it becomes a reality only by the subjective policy of the classes and states. In this connection, war is to be understood as a dialectial unity of political relations, practical political activity and political ideology.[2]

Every war is insepariably linked with the political order from which it arises. To understand the nature of a war, it is therefore necessary to study the policy that preceded it and that leads to it. It plays the determining role in the development of the military doctine, in setting the war aims and it influences the methods of warfare. It affects the planning of the war and, with the aid of the state apparatus, determines the measures that are required for mobilization of the personal and material resources of the country.

This Marxist-Leninist concept of the nature of war expresses two inextricably connected sides. War is a form of policy, a specific form of the political class struggle by means of organized armed force, thus a continuation of the policy of classes and states by violent means. From one side, the essential and determining side, war is the continuation of policy, from the other side, the subordinate side, it represents force, i.e. it is the continuation of the policy by violent means. In the analysis of the nature of a war, it is thus always necessary to expose not only its determining side, the political side--the continuation of policy--but also to point out the specific form of the function of policy in war, i.e. the use of means of force.

Accordingly, war is the dialectical unity of policy and military force, a special condition of society characterized by the fact that the armed forces are the principal means[3] and the armed struggle the principal form of policy. Without policy there is just as little war as there is without use of violent means, of military force by the armed forces. The military policy of the states participating in the Warsaw Pact are guided by the fact that that it is necessary and possible to exclude military force from international relations to prevent a world war with all its possible catastrophic consequences for mankind. The socialist armed forces are raising their combat readiness to make any aggression against socialism into a fatal risk for imperialism. Should it nevertheless not be possible to prevent the aggressive imperialist policy from continuing imperialist military use of force and war against socialism, then the socialist armed forces are faced with the task of crushing those resorting to force, so that an imperialist aggression does not become a global catastrophe for mankind. By exposing the character and the laws of such a possible war, Marxist-Leninist military science contributes to creating conditions so that imperialism does not dare to commit aggression.

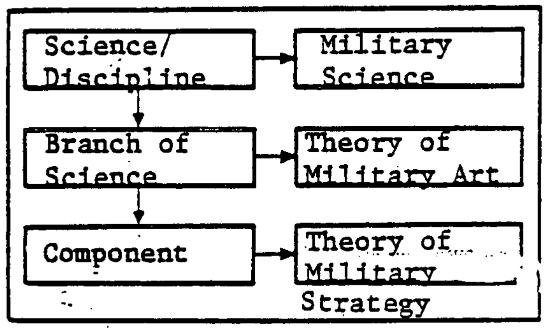
All-around and profound grasping of the nature and the laws of war requires the combination of the efforts of many sciences. Together with them Marxist-Leninist military science studies the dependence of the course and outcome of the war on policy, economy, the proportion of the political-moral, scientific-technical and military possibilities of the warring sides as well as the methods of the military-technical preparation and conduct of the war, which are connected with its extent, the stability of the participating sides and the means of the armed struggle.

Structure of Marxist-Leninist Military Science

Military-scientific knowledge represents a system of varied branches of science with their components (Chart 1). Its structuring and the corresponding assignment of contents are not an end in itself. On the one hand, they must reflect as completely as possible the objective phenomena and processes to be examined and on the other hand they must be made manageable for practical work by expedient classification. Only in this manner is it possible for the knowledge included in Marxist-Leninist military science to produce combat effectiveness in the armed forces and to help strengthen socialist national defense. In final analysis the military-scientific findings have only the purpose to contribute to the all-around increase in the defensive strength of our country and of the entire socialist defense alliance as "science of the future war."[4]

This objective and the dialectic of war determine the complex character of military-scientific work which, with all differentiation, must take into account the unity and the reciprocal connection of the branches of science and their components.

Chart 1: General Structure of Marxist-Leninist Military Science



The principal subject of the research on Marxist-Leninist military science is the armed combat in wartime. This circumstance also shapes its structure. Accordingly Marxist-Leninist military science is divided into the following basic branches of science (Chart 2);

--Theory of military art

--Theory of the structure of the armed forces

--Theory of military training and education

--Theory of the military economy and the rear services.

The laws of military science constitute its core. They are a more or less faithful reflection of the laws of war (Chart 3) and of the laws of armed combat (Chart 4). It is the purpose of military science to clarify under the concrete conditions of war the content of these laws, the character of their effect and the forms in which they manifest themselves and to determine the possible ways and methods for effectively utilizing them. Thus research on these laws is of great importance for the elaboration of theses, principles and rules of the military art and thus one of the most important military-technical tasks.

Moreover it is to be noted that the military theory has not only the task of revealing the laws of war and of armed combat, to substantiate their effect mechanism and to determine their concrete manifestations in the respective stage of development but also to formulate principles. These principles guarantee the most effective utilization of the known laws in the process of military activity; thus they are the most general and most fundamental demands on military practice. They include

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Key to Chart 2 on page 19:

[1] System of Knowledge on the Character and Laws of War, Preparation of the Armed Forces and of the Country for War and the Methods of Warfare

[2] Military science has class character. Structure and content differ depending on the class nature of the state and the dominant ideology in it. Together with other sciences it studies war, its laws and the processes of its preparation and prosecution.
Principal object of the research is the armed combat in war.

[3] Marxist-Leninist military science conducts an all-around research to determine the foreign-policy conditions, the military, economic, scientific-technical and political-moral potentials of the sides, the possible variants for triggering wars by an aggressor, the extents, forms and methods of wars. It examines the development prospects of armament and military technology and the possibilities of their production. It studies the main problems of the military art, develops new forms of command, solves tasks of training, the structure of the armed forces and the security of combat actions.

[4] Marxist-Leninist Military Science

[5] Branches of Science

[6] General Theory

[7] Theory of the Military Art

[8] Theory of the Structure of the Armed Forces

[9] Theory of Military Training and Education

[10] Theory of the Military Economy and of the RD

[11] Marxist-Leninist Theory

[12] Fundamentals

[13] Experiences of the Wars

[14] Social, natural and technical sciences connected with the preparation of the armed forces for war, of the creation of means of armed combat and of all-round safeguarding of its preparation and implementation

[15] Social, natural and technical sciences that examine the economic, ideological, legal and other forms of prosecuting combat with the enemy during the war

16 Social Sciences	17 Technical sciences	18 Natural sciences	19 Social sciences	20 Technical sciences	21 Natural sciences
Theory of the party-political work in the armed forces		Military geography	Economy		Astronomy
Military history	Ballistics	Military geodesy	History	Electronics	Physics
Military ethics	Firing theory	Military topography	Law	Energetics	Chemistry
Theory of military law	Military cybernetics	Military hydrometeorology, etc.	Diplomacy	Cybernetics, etc.	Biology
Military pedagogics	Military electronics, etc.	Military geology, etc.	Phychology		Geography
Military psychology, etc.		Military meteorology, etc.	Pedagogics		Physiology, etc.

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Chart 3: Laws of War

1 Internal, Essential and Necessary Relations Among the Phenomena of War That Determine the Character and the Position of War in the Historical Process of its Course and Outcome Existing in the Objective Reality, Thus Independent of the Consciousnesss and the Will of Man

2 Dependence of the war on its political goals

5 Most generalized law: The goals pursued by policy in war determine in advance the activity of the state and social organizations, the relationship to the allied and neutral states, the degree of involvement of the popular masses and the extent of the mobilization of the material and mental forces of the state (of the coalition). They determine extent and character of the armed combat, structure and use of the armed forces, the general strategic war plan, rate and order of its implementation, sequence and strength of the blows, the required forces and means. They determine the tasks of leadership of the war keeping the postwar order in mind.

3 Dependence of the course and outcome of the war on the ratio of the economic forces of the warring states (coalitions)

6 One of the most important laws: Economic conditions are main conditions because in final analysis they determine the level of development of military affairs and the military power of the warring sides. The economic possibilities are reflected in the military-economic potential which is determined by the potentials of material production and by the economic system and by the political order of society. The capability of a state (a coalition) to satisfy the material needs and to produce all necessary means of armed combat depends on the level and character of the productive forces and on the degree of agreement of production conditions and production forces.

4 Dependence of course and outcome of the war on the ratio of the scientific potential of the warring sides

7 This law expresses the significant dependence of the phenomena and processes of war on the achievements of science and technology and on the degree of their practical utilization. The scientific and technical achievements, which are characterized by the scientific potential, influence the military power of the state, the combat effectiveness of the armed forces and the fate of the war. Under the conditions of the transformation of science into a directly effective productive force, a superiority of scientific potential gains extraordinary importance for victory in modern war.

[Key continues]

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Chart 3 continued:

8 Dependence of course and outcome of the war on the ratio of the political-moral forces and potentials of the warring states (coalitions)

9 Dependence of the course and outcome of the war on the ratio of the military forces (potentials) of the warring sides

10 Historically that side wins which embodies a new progressive social and economic order and makes effective use of the opportunities that are provided.

11 This law is expressed in the influence of the social and state order of the warring states, of the social structure of society, of the ratio of the class forces and the superstructure in institutions on the course of the war. Level and condition of the social potentials are determined by the character of the economic conditions, of the social and state order and the ideology predominant in the society as well as by the political goals of the war. The character of the ideology and the political-moral and psychological preparation of the armed forces and the people have essential influence on the political-moral forces.

12 This law is determined by the economic social, political-moral, scientific, technical and the actual military potentials of the warring states (coalitions). Victory and defeat in war are determined by the course of the armed combat, by the ratio of the combat effectiveness of the units and by the possibilities for mobilization of the states (coalitions). Victory directly depends on whether an army possesses adequate modern weapons, trained commanders and soldiers who know how to use them effectively and find and apply the most suitable forms and methods for the command of combat actions.

13 This law exists aside from others which express the historical inevitability of the triumph of the new over the old. It applies especially to wars for the defense of socialism which opens up the way for all peoples to freedom and happiness and guarantees all-around social progress that was previously unknown.

14 Depending upon the extent and character of the war, the laws of the war emerge unevenly. During the course of the war laws regarding the entire war as a process are in effect. Furthermore, there are laws that emerge in war actions of the strategic level or also only of the operational and tactical level. The complex and contradictory character of armed combat, as of war in general, makes recognition of the laws more difficult. The laws of war possess historical character. If the historical conditions change, then certain laws develop, others lose their validity. The effect of one set of laws is reinforced, that of others is weakened.

15 With changes in the relationship of the factors of war to one another the forms change in which the laws become evident; the laws change their content depending on the character of the wars and historical epoch. The change in the ratio of power in the world but also the revolution in military affairs have caused certain changes in the laws of war. For example, in modern wars the victory of one side and the defeat of the other vitally depends on the international ties of the warring sides. The knowledge of the war is the basis for purposeful action of the popular masses, classes, parties, armed forces and individual persons. The laws of war and the combat actions are reflected in knowledge as laws of the military theory.

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Chart 4: Laws of Armed Combat

1 In the objective reality, thus existing inner, essential and necessary relations independent of consciousness and will between the phenomena of armed struggle which determine the extent and types of combat actions, the forms and methods of leadership, the basic direction of the development of the armed combat and its results

2 Dependence of the armed struggle on the military goals

5 The military goals in final analysis result from the political goals. They find their embodiment in the strategic and operational tasks, in the force groupings, in the sequence and the directions of the strikes, in the coordination among the military forces and branches of service, in the safeguarding of the units, etc.

3 Dependence of the armed struggle on the Ratio of the combat effectiveness of the troops of the warring sides

6 This law expresses the objective trend of development of the armed struggle in favor of the side that possesses superiority. But this does not exclude the possibility that in certain cases that side can be victorious which has the lesser combat effectiveness between the two sides, for superior combat effectiveness only signifies the possibility of victory which must be achieved. In this connection the principal role is played by the ability of the commander (commander-in-chief) and the conscious and prudent actions of the combat collective.

4 Dependence of the effectiveness of the combat actions on the agreement of forces and means and their methods of employment with the set goals (tasks) and the situation that has arisen

7 The influence of the goals and means of armed combat on the methods of its leadership and on its results is especially evident as a result of the development of the nuclear missiles and the latest military technology and has necessarily led to change of the methods of the combat actions. Victory now depends directly on whether the armed forces possess an adequate number of the latest weapons, sufficient trained leadership cadres and soldiers who master the modern weapons which they know how to use effectively, who can find and effectively utilize the most suitable forms of warfare.

8 Coordination of the combat actions according to echelons (of the tactical with the operational, of the operational with the strategic and of the strategic with the overall course of the war) and the mutual dependence of these actions among themselves.

11 With the development of the means of armed combat the character of the interaction among the operations of the individual echelons changes. Under the conditions of modern war, the strategic operations in relation to the operations of the lower echelons as well as for the war as a whole play the decisive role in employing nuclear weapons against vital economic, political and military objects of the enemy.

9 Unity of the combat actions of the armed forces according to time and space to achieve specific military-policy goals

12 The law reflects the significant connections on which the process of the operations is based, which the military forces and branches of service conduct to attain the overall goal on the ground, at sea and in the air.

10 Uneven distribution of the forces and means in the battle formations (in the operational build-up) of the units

13 The law finds its practical embodiment in the principle of the concentration of the main efforts of the forces in the decisive sector or in the decisive direction.

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--Principles of the military art, such as coordinated employment and close coordination between the associations and commands of all military services and branches of service as well as stable and uninterrupted command,

--Principles of training, e.g., the principle of communist partisanship and of the scientific character,

--Principles of the rear security, such as concentration of the main efforts of the rear services on the security of the groupings of the armed forces which fulfill the main tasks.

Just as other sciences, military science possesses a general theory (general principles), which examines, among other things;

--content and tasks of military science,

--their connection to military policy and military doctrine,

--the relationship among war, policy and economy,

--the general laws of armed combat,

--the principles of the preparation and the employment of the military services.

In summary it can be stated that the main task of military science in past, present and future was, is and will remain the disclosure of the character of a possible war, formulation and determination of the laws, necessary developments, categories and principles.

In the effort to cope with the growing extent and complexity of military knowledge, the trend becomes evident from time to time to expand the structure of military science by new elements and branches of science, such as the theory of command, the theory of the military forces, the theory of civil defense, the theory of armament, etc. With all specificity of the various fields and the quite understandable effort for profoundness and differentiation in the analysis of the corresponding problems and processes the question should, however, always be asked first whether a change in classification and structure that is being sought guarantees at the same time that the military scientific findings can be better handled by the practice (also the practice of military-scientific research) and whether or not the new structure runs counter to the trend of the growing complexity.

Therefore we consider the incorporation of the theory of command of the armed forces and of troop command in all branches of military science as it is now practiced as useful. As a result it is possible to examine the problems of command taking into account the specifics of the various areas of military theory and practice in the strategic, operational and tactical scale.

FOOTNOTES

1. "Soviet Military Encyclopedia, Selection," Berlin 1979, No 6, p 67.

2. See E. Hocke/W. Scheler, "The Unity of Socialism and Peace. On the Philosophical Problems of War and Peace at the Present Time," Berlin 1977, p 95.

3. As a function of the participating social forces, other armed forces can also be principal means of policy. -- The author.

4. I.J. Schawrow/M.I. Galkin, "Methodology of the Military-scientific Finding," Berlin 1980, p 57.

Part II

Theory of the Martial Art

It is a system of knowledge on the laws, contents and character of war and warfare, on methods and forms of preparation and prosecution of operations, on land, at sea and in the air in strategic, operational and tactical scales (Chart 1).[1] It comprises the theories of military strategy, of the operational art and tactics which are closely linked. The theory of the martial art thus is a three-stage concept which represents the sum of the mentioned theories as well as their generalization.

In the principles of the martial art (Chart 2), which are equally of importance for operations on strategic, operational and tactical scale, the ways for the practical application of the objective laws of war in the preparation and prosecution of the war, of the operation and of the battle are reflected.

A main component of the theory of the martial art and at the same time its leading field is the theory of the military strategy.[2] It is a system of knowledge on the laws, the contents and the character of war, on the methods and forms of the preparation and prosecution of strategic operations and the command of the armed forces. It creates the theoretical foundations for planning, preparation and prosecution of strategic operations and of the war as a whole. In particular it studies the theory of the military strategy:

--laws, contents and character of a possible war;

--the types, forms and methods of strategic operations;

--the methods of executing strategic operations;

--questions of command of the armed forces in strategic operations and in war in general;

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Chart 1: Components of the Theory of the Martial Art, Contents and Tasks

1 System of Knowledge on Laws, Content and Character of War and of Warfare, on Methods and Forms of Preparation and Execution of Combat Actions on Land, at Sea and in the Air in Strategic, Operational and Tactical Scales

2 The theory of military strategy is a system of knowledge on the laws, content and character of war, methods and forms of preparation and execution of war and strategic combat actions and the command of the armed forces.

It develops the theoretical foundations of preparation and execution of war and strategic operations

It coordinates the development of the theory of the military strategy with the other components of military science

4 examines

3
1. Laws, content and character of a possible future war
2. Methods of execution of strategic operations
3. Types, forms and methods of strategic actions
4. Fundamentals of planning strategic actions
5. Command of the armed forces
6. Problems of strategic security
7. Views of the probable enemy, his forces, means and potentials to carry on war and strategic operations

5 The theory of the operational art is a system of knowledge on the laws, content and character of operational combat actions, the methods and forms of their preparation and execution.

It develops the theoretical foundations of the preparation and execution of joint and independent operations (combat actions) of the operational associations of the military forces.

examines

6
1. Laws, content and character of the operations
2. Fundamentals of organization and execution as well as methods of the command of operations
3. Fundamentals of planning operational actions
4. Leadership of the commands and associations participating in the operations
5. Coordination between the operational associations
6. Problems of operational security
7. Views of the probable enemy, his forces, means and potentials to carry out operations

7 The theory of tactics is a system of knowledge on laws, content and character of tactical combat actions, the methods and forms of their preparation and execution.

It develops the theoretical foundations of the preparation and execution of battles of the units, forces and commands of various types of armed forces, branches of service and special forces.

examines

8
1. Laws, character and content of combat
2. Fundamentals of organization and execution as well as methods of the command of battles
3. Fundamentals of planning tactical actions
4. Leadership of the units, forces and commands participating in the battles
5. Coordination among commands, forces, units, branches of service
6. Problems of tactical security
7. Views of the probable enemy, his forces, means and potentials to carry out battles

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Chart 2: Principles of the Martial Art

1 Fundamental Guiding Principles Reflecting the Objectively Acting Laws of Armed Combat

2 High Combat-readiness to Fulfill the Missions Under Any Conditions of the Beginning and the Conduct of the War

3 Unexpectedness, resoluteness, activity of the combat actions, constant striving to attain and maintain the initiative

4 Taking into account and full utilization of the political-moral factor

5 Complete utilization of various means and combat methods to achieve victory

6 Firm and uninterrupted leadership

7 Coordinated use and close coordination between the associations (commands) of all military forces and branches of service

8 Unyieldingness and resoluteness in the fulfillment of the assigned missions

9 Determined concentration of the main efforts at the right moment, in the most important directions for the fulfillment of the principal tasks

10 All-around safeguarding of the combat actions (battle operations)

11 Simultaneous destruction of the enemy in the entire depth of his disposition, timely increase in the efforts, bold maneuver with forces and means, development of the combat actions at a high rate and crushing of the enemy within a short time

12 Timely creation of reserves and restoring of the effectiveness of the forces

13 The principles of the martial art are a result of the recognition of the laws of armed combat and depend on the status of development of the productive forces and production conditions, on quantity and quality of forces and means of armed combat, on the political goals of the war, the political-moral condition of the forces, the status of development of the military science and other factors.

They develop and become more perfect just as the entire content of military-scientific knowledge. Some principles lose their significance and become part of military historical science; others assume a new content and finally new, previously unknown principles are formulated.

14 A principle is scientific if it agrees with the recognized laws of war and of the combat actions to the maximum extent possible. The sum of the principles must correspond to the objective laws of the effect and the development of the war and of the military processes.

The principles empirically reflect the laws up to the recognition of the laws of armed combat.

The principles of martial art characterize not only the general direction of military activity. Therefore, concrete forms of military knowledge are needed. The principles lead to rules, regulations, recommendations in questions of the conduct of war and of the combat actions as well as to perfecting weapons, organization and training of the forces.

--problems of strategic security;

--opinions of the probable enemy, his forces, means and possibilities for conducting a war and executing strategic operations.

Beyond that, in fulfillment of its coordination function the theory of the military strategy is concerned with the solution of problems resulting from the character of a possible war regarding preparation of the armed forces, of the theater of war (of the territory of the country), the economy and the population of the country. Thus it also creates important foundations for the military doctrine of the state which is developed as a state maxim for the preparation of the country and its armed forces for a possible war by the party and state leadership concerned.

Policy and military strategy closely interact; however, policy is the more important and decisive factor. It determines the war aims and the methods of warfare, poses the problems to military strategy and creates the prerequisites for their solution.

The imperialist strategy of total confrontation requires further development and strengthening of the collective defense of the states participating in the Warsaw Pact. The basis for that is the coalition strategy, are the common views of the fraternal socialist countries which are directed towards guaranteeing the security of the states participating in the Warsaw Pact, towards preventing a war and towards warding off any aggression.

Just as the military strategy in a country is unified for all military forces because modern operations can only be conducted by coordinated common efforts of all military forces, this requirement must also be met in the coalition.[3] Therefore, the theory of the coalition strategy must develop above all the theoretical foundations for planning the commitment of the Unified Armed Forces, of the organization of their security, of the command and the coordination especially for preparation and execution of operations within the coalition.

The theory of the operational art is a system of knowledge on the laws, the contents and the character of operational actions, on the methods and forms of their preparation and execution.[4] It develops the methods

--for preparation and execution of operations,

--for command of forces in operations,

--for organization and maintenance of coordination,

--for the all-around security of the forces participating in the operations.

Furthermore it formulates the operational requirements for structure and weapons of the associations as well as operational development of the theater of war. Moreover, it studies the views of the probable enemy on executing operations or combat actions on an operational scale.

Chart 3 Components of the Theory of the Structure of the Armed Forces

Components

General Principles	Theory of the organization of the military service and preparation of the military cadres
Theory of the Organizational Structure of the armed forces	Theory of the billeting of the units (forces)
Theory of the development of the military technology and the technical equipment of the armed forces	Theory of the creation of the mobilization reserves
Theory of the replenishment of the armed forces	Theory of guaranteeing the permanent combat readiness of the units (forces)

Theory of the Buildup of the military forces, their branches of service, special troops and services

The operation art theory comprises:

--the theory of the general operational art (the operational art of the general associations);

--the theory of the operational art of the strategic missile forces, of the air defense forces, the air forces, the naval forces, the operational rear services of the armed forces and civil defense.

the theory of tactics is a system of knowledge concerning the laws of the content and the character of modern combat. It develops the methods

--for preparation and execution of combat actions,

--for command of the units, forces, and commands

--for securing the combat actions.

The theory of tactics dialectically interacts with the theories of operational art and of military strategy by whose findings it is guided. The theory of tactics comprises:

--the theory of the general tactics,

--the theory of the tactics of the military services (LaSK (ground forces?), air forces, air defense forces, SSK

--the theory of the branches of service (naval forces) and special forces,

--the theory of the tactics of the border troops.

The Theory of the Structures of the Armed Forces

The theory of the armed forces structure comprises a system of knowledge on the creation, preparation and consolidation of the armed forces on the basis of the social and political order of the state, its policy, its economy and military doctrine. It is closely linked to other branches of Marxist-Leninist military science and is based on their findings. Conversely, its conclusions and recommendations react on these theories and thus promote their common development.

The content of the theory of the armed forces structure is shaped especially by the practical tasks of the armed defense of the country and of the coalition and is directed toward the disclosure and the examination of the laws of the armed forces structure under concrete historical conditions.

In general the content of the theory of the armed forces structure must provide an answer to the following questions:

1. What forces must be available and what is the direction of their structure?

2. What degree of combat readiness do the forces have to possess to be ready at any time to quickly crush an aggressor?

The components of the theory of the armed forces structure are evident from Chart 3. Just as any other theory, the theory of the armed forces structure is not unchangeable either. The uninterrupted development of military affairs and perfecting of military-science knowledge also cause changes in the fundamental questions of the armed forces structure.

Chart 4 Components of the Theory of Military Training and Education

Key:
1. Components
2. Fundamentals of military training
3. Methodology of military training and education
4. Fundamentals of political and military education
5. Principles of military training
6. Forms of military training
7. Methods of military training
8. Forms of control of military training
9. Operational training
10. Combat training
11. In the military forces
12. In the higher military teaching facilities
13. Political training
14. Partial methodologies according to types of training and training subjects
15. Partial methodologies of the subjects of instruction (subjects)
16. Social sciences
17. Military pedagogics
18. Military psychology

Theory of Military Training and Education

The theory of military training and education is also closely linked with other branches of the Marxist-Leninist military science, especially, however, with the theory of the martial art. It develops the forms and methods of training of politically conscious and militarily competent defenders of the fatherland, the development of high political and fighting-moral qualities and establishment of the cohesiveness of the units, forces, ships and commands to guarantee high combat effectiveness and battle readiness of the armed forces.

The theory of the military training contains the fundamentals of military training, the fundamentals of military and political education and the methodology of military training and education. There is close interaction among these components[5] (Chart 4). The fundamentals of military training include the requirements for combat and operational training, the regulations, the object, the goals and tasks of the types of training, their contents, their structure and their command and organization (setting of the tasks, planning, security, control, furnishing proof).

The fundamentals of military and political education show the methods of education of the manpower of the armed forces under the conditions of peacetime and wartime, determine the ways and means of the education of the military personnel to high moral-fighting, moral-political and moral-psychological qualities. The content of the educational work is set on the basis of the teachings of Marxist-Leninist theory, of the decision of the party and state leadership and of the demands of the military regulations.

The methodology of military training and education is a complex of scientifically based principles on the best forms, methods and processes of imparting knowledge, skills and capabilities to the individual soldier or collective which they require in their practical activity in peacetime as well as in wartime.

The theory of military training and education must ensure that the practice of education and training corresponds to the demands of the rapidly developing technology and martial art.

The Theory of the Military Economy and of the Rear Services

As a system of theoretical knowledge of the laws of the economic safeguarding of the military needs of the state, the military economy comprises the military problems of the economic branch and other sciences cutting across branch lines and the theory of the military economy. As a relatively independent branch of economic science, military economics, with its scientific guiding principles to justify the material requirements of the forces structure and the execution of armed combat to satisfy these requirements, becomes an integral part of military science.[6]

It examines

--the interactions between war and economy,

--the laws of the effectiveness of the military economy in peacetime,

--problems of assessment and comparision of the military-economic potentials of the countries and coalitions facing each other in hostility,

--the possibilities of economic mobilization and methods to guarantee the stability of the economy in wartime,

--the conditions of the economic safeguarding of national defense and of the combat actions,

--the economic preparation of the territory for the state of war,

--problems of the effective employment of the defense resources in the interest of high combat effectiveness and of combat and operational readiness.

The theory of the rear services in many ways is linked to the theory of the military economy. This also explains why both theories are regarded as a science branch of military science. This connection is based on the common features of the goals to safeguard the armed forces in peace and in war and it also touches on the process of converting the economy to warfooting.

The theory of the rear services studies

--the general laws and principles of the organization of the rear services of the armed forces,

--the system of rear service securing of the armed forces in peace and war,

--organization and activity of the strategic hinterland, its interaction with the wartime economy,

--role and place of the operational rear services of the forces in the overall system of the rear services of the forces,

--the special features of the command of the rear services.

In general, it is characteristic of the Marxist-Leninist military science and its subject constantly expands, which entails changes in its contents and its structure.

FOOTNOTES

1. See "Soviet Military Encyclopedia, Selections," No. 5, Berlin, 1978, p 46 ff.

2. Ibid., No. 25, Berlin 1983, p 34 ff.

3. See Ibid., No. 10, Berlin 1980, p 123 ff.

4. See Ibid., No. 18, Berlin 1982, p 114 ff.

5. See Author's Collective, "Organization and Methodology of Combat and Operational Training," Study Material, Part I, Dresden 1981, p 7.

6. See "Soviet Military Encyclopedia," No. 25, p 31 f.

NEW COMBAT REGULATIONS FOR GROUND FORCES

East Berlin MILITAERWESEN in German Sep 84 pp 45-50

[Article by Lt. Col. H. Wolf, military scientist, Ground Forces Command: "New Combat Regulations for Ground Forces Units"]

[Text] Along with the planned equipping of the ground forces of the NVA [National People's Army] with modern weapons and equipment (effect on the ways and means of combat operations, etc.) it was necessary to develop new combat regulations. The basis for these were the currently effective combat regulations of the Soviet Army.

The following came into effect:

— DV 325/0/001, Combat Regulation for Ground Forces (Battalion, Company);

— DV 325/0/002, Combat Regulation for Ground Forces (Platoon, Tank Platoon).

These combat regulations are designed for

--the organization of combat operations and leadership of units by the commanders in fulfillment of the combat task;

--training of officers and non-commissioned officers in the schools and training installations of the ground forces, and their continuing training in troop units;

--organization and execution of combat training, especially of tactical maneuvers of reinforced battalions and companies.

The main portion of the combat regulations deals with the combat operations of attack and defense. Relocation, quartering, combat support and technical and rear support are also touched upon. The appendices of the DV 325/0/001 were markedly expanded. They include:

Tactical symbols,

Defensive scheme of a reinforced MSK (Spz) [mechanized rifle company, APC]

Defensive scheme of a reinforced PK [tank company]

Schematic drawing of quartering a battalion (a company).

Pre-battle and battle organization of the battalion (the company),

System for transmission of orders (signals) and for transmitting tasks by radio,

Preparation and compilation of combat documents,

Abbreviations,

Correspondence of units and headquarters,

Field fortifications.

The commanders thus receive valuable aids for preparing combat documents and for leading units.

Both combat regulations reflect the increased requirements of the general battle and contain current, specific guidelines for combat use of the units of the ground forces. The guidelines regarding organization of combat operations and leading the units in the fulfilment of combat missions have been especially expanded. These are a good basis for continuing education of officers in duty positions, for training at military schools, as well as for organizing and conducting combat training.

With the publication of the new combat regulations the following were superseded:

-- DV 250/0/001, Combat Regulation for Mechanized Rifle, Tank, and Airborne Units (Battalion--Company), issued in 1966;

-- DV 250/0/002, Combat Regulation for Mechanized Rifle and Tank Units (platoon, squad, tanks), issued in 1966;

-- DV 250/0/010, Combat Operations of Mechanized Riflemen with APC (Battalion to squad, APC), issued in 1973.

Next, I would like to explain the new guidelines for leading units in combat, and to suggest conclusions for their realization in troop service. I limit myself to DV 325/0/001, Combat Regulation for Ground Forces (Battalion, Company).

New Guidelines for Combat Organization

Operations of general combat include the attack and the defense. A meeting engagement is a kind of attack operation. It develops whenever two sides are attempting to accomplish their missions by attacking. Within the basis of the general combat the basic principles of combat are determined and explained. These include, among others:

--Assurance of a constantly high state of combat readiness of the units;

--Continuous and exact cooperation in combat;

--Decisive concentration of the main effort of the units in the main direction and at the right time;

--Combination of fire and maneuver as well as maneuvering with units and with fire support.

These are important prerequisites for success in combat. However, they are only effective when the commanders apply them in their entirety in the organization for combat and in leading units toward fulfilment of the combat mission. Thus these basic principles should not be considered as something long known, rather, they should be thoroughly studied and specific conclusions for work in combat should be derived from them.

General combat with its maneuver-rich character and the rapid changes in situation demands consistent, uninterrupted, operational, and comprehensive leadership from the battalion commander (company commander). Due to the ever more complicated weaponry and combat equipment of the battalion and the often very brief time available for organizing combat operations and preparing the units great demands are placed on the battalion commander (company commander). He has to accomplish an increasing amount of work in organizing for combat and leading the units of the battalion in fulfillment of the combat mission. The DV 325/0/001 takes this into account by

--outlining more comprehensively and specifically the tasks of the battalion commander (company commander) in organizing for battle,

--determining clearly the duties and tasks of his deputies and especially by including the chief of staff specifically in the organization and managing of the battle,

--defining political work as a basic component in preparation and execution of combat, and by fixing the foci for political work in the various combat operations,

--providing valuable assistance in the appendices for preparation of combat documents and for leading of the units.

As a rule, the battalion commander (company commander) is to organize for combat in the terrain, or, if the situation makes that impossible, with the aid of a map (or terrain model). In that case he must use all opportunities to precisely announce his decision, unit missions, and cooperation in the field.

The DV 325/0/001 provides for two methods for the battalion commander to organize for battle (Fig. 1). The method to be used depends on the specific situation, the missions received, and the time available. Work based on the combat order of the regimental commander is considered the basic method. The second method can be used when there is relatively little time to organize for combat, or when the battalion commander has only received a fragmentary combat order. Combination of the two methods is possible.

In his work the battalion commander depends considerably on the regimental commander's methods of operation. If he receives the combat order and directives regarding organization, comprehensive support, leadership, and political work, and if the regimental commander precisely outlines his decision and the mission fo the battalion during a field reconnaissance, the battalion commander has all the needed data for a determined, sequential work in organizing for the battle. He receives the tasks at a later time than if the regimental commander had worked according to the parallel method. However, the simultaneous transmittal of the total task makes a comprehensive evaluation of all problems and their interconnections possible. If the battalion commander receives only a preliminary combat order during the mission briefing he is not yet completely familiar with the concept of the regimental commander for the battle and with the specific combat mission of his battalion. He must start work with this fragmentary task (earlier than in the case of sequential preparation). His work is thus greatly dependent on the contents of the fragmentary mission; it can be concluded only after the receipt of the combat mission.

A new task for the battalion commander (company commander) in organizing for battle is the need to determine the concept of the battle. It is the basis for decision. With the concept the battalion commander (company commander) has to determine:

--the direction of the main effort in the attack (or the direction of the main effort and the terrain sector on which the steadfastness of the defense depends);

--the sequence and methods for destroying the enemy;

--organization for engaging the enemy with fire from organic and detailed weapons;

--battalion (company) order of battle.

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Key to Figure 1 on preceding page:

[1]Basis for the work of the commander, MSB/PB

[2]Combat order from chief, troop unit

[3]Preliminary combat order from chief, troop unit

[4]Sequence of Action

Explanation of the task
Determining immediate measures
Time calculation
Issue of directives to chief of staff to prepare units
Organization of reconnaissance
Organization for field work
Evaluation of the situation

[5]Decisionmaking

Informing regimental commander of the decision
Announcement to deputies and company commanders and directives for combat support
Organization for control
Organization for political work
Reconnaissance
Combat orders (issued orally)
Organization for cooperation
Control of unit preparations
Report of preparedness

[6]Deciding on concept of battle

Report to regimental commander and announcement of deputies
Issue of preliminary orders to company commanders and directives for combat support
Organization for control
Organization for political work

[7]Combat Order form chief, troop unit

[8]Conclusion of decisionmaking

Reconnaissance
Combat order (issued orally)
Organization for cooperation
Control of unit preparations
Report of preparedness

The concept of the battle is part of the combat order.

The decisive concentration of the main effort of the units in the main direction and at the right time is among the basic principles for conducting general combat. According to previous combat regulation the battalion commander merely had to determine the terrain sectors and objects on which the main effort was to be expended during the reconnaissance before passing to the defense. With the concentration of the main effort superiority over the enemy is to be achieved in that direction, or the unit is to prevail over numerically superior forces. This is achieved by

--appropriate division of forces and means,

--employment of units with the highest combat force and most effective means of fire in the main direction,

--bold maneuvers with forces and equipment, as well as with fire.

The order of battle of the battalion (the company) has been markedly expanded.

According to the new guidelines it includes:

--Within the battalion:

a. Units of the first echelon;

b. The second echelon or reserves;

c. Weapons and air defense assets retained under the control of the battalion commander;

d. Battalion rear services;

--Within the company:

a. Units of the first echelon;

b. The second echelon (only in the defense);

c. Weapons retained under control of the company commander.

Constant and precise cooperation is also a basic principle for conducting a general battle. Usually it is organized in the field to the depth of a line of sight, to the depth of the entire combat mission with the help of maps or terrain models. The battalion (company) commander may organize for cooperation according to two methods:

--according to the method of issuing directives when the time is extremely limited and only brief consideration is possible;

--according to the method of receiving reports from subordinate commanders about the use of their units according to the probable actions of the enemy.

The comprehensive support of battalion (company) combat includes:

--combat support,

--technical support and

--rear support.

The combat support includes:

--reconnaissance,

--protection from mass destruction weapons,

--cover and concealment,

--engineer support,

--chemical support,

--security.

Guidelines of the new combat regulations regarding the tasks of the commander in the organization for battle must be put into effect in practice. I consider this to be an important contribution to further increases in combat power and combat readiness of the ground forces.

Recommendation for Implementing the New Guidelines

Next recommendations, especially for commander, regarding ways and means to implement the new guidelines are presented. Above all, the following should be used:

--Within the framework of continuing education of officers: the independent studies, continuing education in the duty position, training in staff service;

--combat exercises and tactical maneuvers with reinforced MSB/PB [mechanized rifle battalion/tank battalion] and MSK/PK [mechanized rifle company/tank company].

Within the framework of officer continuing education the focus is to be placed on independent study. Superiors must, according to the regulations regarding training and advanced training of officers, fix the goals and tasks for the study during one semiannual training cycle, taking into account the main tasks of the training cycle as well as the knowledge and skills of the officer in question. It is appropriate to develop individual goals. The goal for the independent study for a battalion chief of staff could be:

"Actualization and perfection of skills as well as the development of conclusions regarding the organization and maintenance of an uninterrupted control of the units and the combat readiness of the battalion." The areas of concentration for the study of this chief of staff should include:

--the basic principles for carrying out general combat;

--the immediate organization of reconnaissance within the battalion;

--development of course of action for battalion commander's decisions;

--organization of combat, technical, and rear support;

--organization of a reliable communication network in the battalion.

For this the chief of staff must derive some conclusions regarding tasks he must personally accomplish in organizing and leading in combat. The extent of the tasks for independent study must be appropriate for the time allocated for it per month (10 hours during duty).

In continuing education in a duty position (for unit commanders) for battle organization group exercises and tactical problems should be carried out or solved. For example, it is possible in this fashion to train officers in arriving at the concept of a battle in the field on the basis of a tactical situation. Presentations regarding the tasks of the commander in the organization of the battle must remain the exception due to the relatively brief period available for this kind of continuing study (24 hours in the semi-annual training cycle).

Within staff duty training (in addition to continuing education in a duty position) the focus should be on the questions of organizing for battle. For example, it is possible to train the staffs of the battalions in cooperation with the regimental staff in the organization for battle (parallel or sequential method).

Continuing training of officers is especially effective when their aspects have been coordinated in the training plan for the semi-annual training cycle, are directed on the main aspects of combat training, and are carried out at a high standard.

Now some recommendations for implementing certain guidelines of the new combat regulations regarding the organization for battle during tactical exercises. It is possible to train commanders and staffs in their tasks for organizing the battle within these combat-approximating exercises. The concept of the tactical exercise is of great importance. The tactical tasks and stipulations must be such that the training commander and his deputy are forced to solve all tasks regarding the organization and leadership in combat. For the chief of staff of the battalion opportunities must exist

--to personally organize battalion reconnaissance (mission statement, preparation), collect reconnaissance data and process them, transmit them to the commander and higher headquarters, and inform detailed and supporting units and neighbors;

--to assist the battalion commander in the organization of comprehensive support and maintenance of cooperation;

--to organize and constantly maintain communication links within the battalion and to detailed and supporting units;

--to organize the resupply of the battalion with ammunition, subsistence, and other material supplies.

During the tactical exercise the director, his deputy, and also the umpires are to train the exercising commander and their deputies in the organization and managing of the battle. This is best done through deliberate and thorough briefing and control. This includes, among others, that

--one is convinced that the participants are aware of the tactical situation and can draw conclusion from this regarding their further tasks;

--training is interrupted in the case of deviation from combat regulations and that the mistakes and shortcomings are discussed;

--should the participants lack data needed for solving a problem, these are transmitted to them in the role of a superior.

Evaluations of tactical exercises should be measures for continuing education of the participants. Evaluations must contribute to the development of tactical thinking among officers and to a critical evaluation of one's own actions. The focus of an evaluation should in no way consist of describing the events that all participants observed in the training area. Rather, evaluation becomes interesting and instructive when the most important actions of the commanders and units are analyzed and evaluated on the basis of combat regulations. It is effective to supplement the evaluation report with a schematic representation of appropriate decisions as well as with battle documents prepared by the participants in the course of the exercise. To remove shortcomings observed during the tactical exercise in the work of commanders and staffs goals for continuing military education are to be developed.

TECHNICAL SUPPORT FOR NAVAL FORCES DETAILED

East Berlin MILITAERWESEN in German Sep 84 pp 58-62

[Article by Cpt (Naval) D. Jochmann, engineer: "On the Technical Support of Combat and Auxiliary Ships"]

Technical support in the armed services has the goal of maintaining a high degree of reliability and readiness of combat and support equipment (military equipment) and to restore its readiness after technical failures in a rapid manner. For the level and extent of technical support two basic requirements are essential: First, the requirement for a constantly high degree of readiness of the socialist armed forces.

Second, the requirement for an economical use of the modern military equipment in all areas of the armed forces as well as for an effective material use in maintenance work.

The introduction of ever more modern military equipment necessarily places new, increasing requirements on the support agencies. This fact forces the services to adapt the support system to the new requirements. One example is the danger in the system of combat support in the Soviet forces. While, for example, the "Soviet Military Encyclopedia" (issued in 1978) still listed four main categories--combat or operational, special, rear and technical support--the edition of 1984 lists only three main kinds of combat support. These include

--Operational (combat) support,

--Special technical support, and

--Rear support.

Technical support is now detailed to the special technical support. It includes ten kinds of support applicable to all branches and including the entire military equipment. For naval forces an additional (11th) category was introduced--the technical support of combat and auxiliary vessels and of their special weapons and ammunition (see Fig. 1).

Fig. 1. Scheme of supporting combat operations according to the 1984 USSR military encyclopedia (conceptual representation)

Key:
1. Support of combat operations
2. Operational (combat) support
3. Special technical support
4. Rear support
5. Technical nuclear weapon support
6. Technical missile support
7. Technical support
8. Calibration support
9. Technical missile support
10. Radioelectronic support
11. Aviation technical support
12. Artillery technical support
13. Armor technical support
14. Automotive maintenance support
15. Engineer technical support
16. Technical chemical support
17. Technical support for signal and data processing systems
18. Technical support for the equipment of rear services
19. Technical support of ships and of their peculiar armament and equipment[1]
20. [1]Applies only to naval forces

This refinement takes better account of the fact that a ship with its equipment, weapons, machinery and hull possesses pronounced system characteristics. After all, the technical support of a combat or auxiliary ship must be carried out with the goal of maintaining or restoring the ability of the entire ship to function in all conditions.

Development of a Technical Support System of the People's Navy

Naval forces of the GDR People's Army consisted in the 50s of ships and boats that could be adequately supported technically with the existing material means and methods due to their relatively simply machinery, armaments, and equipment. Use and maintenance of these ships and boats was carried out according to various regulations and manuals. A disadvantage was that the necessary maintenance operations took place in every combat sector at different times, after differing periods of use, and with always differing content. That means, that there was no uniformly coordinated strategy for maintenance of the machinery, armaments, and equipment of the ships and boats. The usual result of this practice was that the equipment and armaments after a period in dock displayed various levels of combat readiness in the different combat sectors. Thus the degree of availability and reliable operation of the individual instruments and installations of the combat and auxiliary ships (boats) differed greatly. Commanders and staffs thus often faced the complicated task to nevertheless organize a continuous combat training.

The possibilities for maintenance were very limited. The maintenance facilities of the main bases had a small complement of machine tools, so that only simple repairs were possible. There were not yet any mobile maintenance ships, so the support of the ships and boats could take place only in stationary installations.

With the delivery of new warships at the end of the 50s there arose the objective necessity to rethink the required measures for technical support, to adapt them to the increased requirements, and to improve the existing practice. The technical services with the support of Soviet specialists created the appropriate prerequisites for appropriate use and maintenance of ships and boats. This included especially the development of operating and maintenance documentation for use on board as well as in maintenance and storage facilities.

With the further delivery of modern warships the need to create a scientific system of technical support became more and more apparent. The personnel requirements were available. The qualification measures introduced by the military leadership had been effective. The naval forces received graduates of military academies, universities, as well as the higher and specialized schools of the USSR and GDR. In this way the realizations of Soviet military science and of technical sciences could be evaluated and creatively applied in an ever increasing measure.

As a result of the scientific-technical progress the technical support had developed to an independent category of rear services of the Soviet fleet. This had become necessary since the navy had to have extensive and efficient installations for maintaining and restoring the mission readiness of ships and boats.

Building on these realizations and experiences the People's Navy also developed the necessary organs and installations for technical support. In the mid-60s followed the centralization of direction of the organs and installations of technical support took place, a modern maintenance strategy for ships and boats was developed, and its step by step implementation was undertaken. This represented an important contribution toward overcoming the existing shortcomings that were due to the complex ship maintenance and uniform use. The system of technical support of combat and auxiliary ships had been developed.

Further Perfection of the Technical Support System

This technical support system must assure:

--the prescribed use of military equipment as well as the timely and prescribed execution of regular preventive maintenance (PVI).

--planned and extraordinary maintenance,

--implementation of necessary measures for passive ship safety as well as of technical reliability,

--perfection-modernization of machinery, armaments and equipment of the ships,

--mothballing and recommissioning of ships.

The increasingly more complicated technology, armaments and equipment, especially on combat ships, the growth of technical and weapon systems on board of each ship, the requirement to assure the highest degree of combat readiness (this includes the need for reliable functioning of the systems as well as for technical readiness and rapid repair of damaged vessels)--all require that the system of technical support must be continually further improved.

At the same time, however, all technical support processes had to be approached from the standpoint of responsible military economy. Faultless use and maintenance of the technology were to keep the financial and material expenditures needed for assuring a high technical readiness of ships and boats at a minimum. Through the use of scientific realizations and on the basis of an analysis of previous work the organs of the rear services rationalized the system of technical support and adapted it to the new requirements.

What are the Results Today?

In the area of ship maintenance, for example, a complex maintenance has been introduced. Planning, preparing, and carrying out of these operations on the ships takes place on the basis of modern maintenance technology. It is a prerequisite for performing maintenance work at justifiable time periods. "Planned maintenance includes all measures of technically required inspections and maintenance of instruments, components, equipment and systems in all combat areas of the ships and the ships' hulls which assure mission readiness over the following operational period."[1] The organs of the rear services achieved great economic benefit by inspecting the regulations for ship maintenance, specifying certain criteria, and thus arriving at optimal solutions. As a result of this work the maintenance intervals for certain ship systems could be lengthened and the maintenance capacities of docks and the supplying industry could be freed. These results became possible especially through decisive improvements in the PVI systems. PVI is "a part of the ship maintenance system and includes preparation, carrying out, and evaluation of the technical and general maintenance. It contributes to maintaining the full mission readiness of the vessel over the operational period.."[2] The PVI is designed to "maintain and improve the usefulness and economical operation of military technology through planned and preventive measures and to reduce the cost of repairs. Neglect or non-performance of PVI results in an increase in breakdowns..."[3]

Along with operational inspection in the combat sectors PVI has become a basic prerequisite for maintaining readiness of ships and boats and for assuring reliable functioning of technology and weapons. This contributes markedly to a continuously high degree of combat readiness and favorable conditions for meeting the tasks of combat service and for naval combat training are created.

The successes achieved in the People's Navy in maintaining the mandated coefficients for technical preparedness (KTE) are an indication of the quality and capacity of the technical support system.

In this connection the development that has taken place in the area of support with spare parts, tools, etc. must be pointed out. The improvement of this process was of particular importance in meeting the tasks of unplanned repairs. For example, ADP-supported planning helped to meet satisfactorily the increasing demands. The continuing delivery of ships with modern technology and armaments mandates an even more extensive qualification of army members and civilian employees on all levels of technical support systems, i.e. from the crews of the ships to the maintenance personnel to the members of the rear services. This qualification has to take place with a sufficient head start if it is to be effective at the required point in time. This short history of the development should indicate what a complicated path has been traversed to date in this area.

However, the mission today is to make technical support meet the demands of the 80s and 90s.

Trends in Technical Support

In order to keep step with the delivery of modern ships in the future the system of technical support must continue to be equipped or prepared to fulfill the tasks ahead. For this purpose the new scientific-technological achievements in the field must be applied. To be sure, within the naval forces there is the problem of supporting ships where a relatively lengthy time has passed from the development of the technical project to the actual delivery. Development of individual weapon and technical systems, however, takes place in leaps and bounds, and the most modern scientific achievements (such as in the area of microelectronics) are introduced into these systems ever more rapidly. Thus the demands placed on the technical support of the ships increase automatically, i.e. technical support must at the time of introduction of the new ship systems correspond to that level of development in order to meet the tasks. This demand has greater validity now than ever before, since the combat readiness of the ships largely depends on it. In order to solve these difficult tasks in the future I deem it necessary that the prognosis about the future fleet development also include the requirements for the technical support of the ships. Such an estimate will also meet the demand of the 13th conference of delegates "to orient scientific work more consistently on the need to constantly have the necessary head start for combat power and combat readiness."[4]

For technical support the scientific work could proceed in the following directions:

--rationalization of the maintenance processes with the aim to reduce need for labor and the time required for these processes;

--establishment of the necessary maintenance facilities at the required time and with consideration for future demands;

--rationalization of the processes for delivery of exchange parts, spare parts, etc.;

--calculation of algorithms with an eye on the military economic demands in the technical support of the ships;

--further improvement in the organization and management of the technical support.

FOOTNOTES

1. Directive, A 200/1/103, Ships and Boats -- Maintenance, p 1/1.

2. Service regulation, DV 200/0/001, PVI organization, p 7.

3. Ibid., p 6.

4. "From the report of the PHV secretariat to the 13th Delegate Conference of the SED party organizations in the NVA and GDR border troops. Rapporteur: Col Gen Heinz Kessler." PARTEIARBEITER, special issue, March 1984, p 37.

U.S. SPACE PROGRAM OBJECTIVES SCORED

East Berlin MILITAERWESEN in German Sep 84 pp 68-73

[Article by Lutz Kleinwaechter: "United States Space Armaments"]

[Text] "We are convinced that a policy to reliably prevent weapon stationing in space must become a binding norm of behavior for nations, it must become a generally recognized international obligation."[1] This USSR position is rejected by the Reagan Administration which from the time of coming into office in 1981 has constantly exacerbated the international situation. The new round of nuclear arms race, initiated by it, is expanding. Due to the further development of the U.S. nuclear doctrine there is an immediate danger of a militarization of space.

The current U.S. nuclear doctrine is based both on concepts about nuclear war scenarios and the appropriate principles for using nuclear weapons and on arms programs in the area of nuclear missiles and space systems.

Decision for Space Militarization

The concept for fighting nuclear wars is supported by the Reagan Administration with an extensive nuclear and space arms program. Its core consists of military systems for the nuclear first strike. The potential here includes essentially the command, offensive, and "defensive" components.

1. The Strategic Command, Control, Communications and Intelligence System (C^3I System)

Our (i.e. the U.S. author) C^3I system creates the feasibility that is needed to transform individual weapon systems into an integrated, effective force."[2] Thus this system, 70 to 80 percent of which are based in space, is to assure the command and the joint action of strategic offensive and defensive weapons. The functioning of the C^3I system is the factual prerequisite for the U.S. nuclear war strategy. The demands of the U.S. military to improve the survivability, flexibility, capability and range of this system is aimed at securing the uninterrupted nuclear first strike potential under all conditions and in all possible war settings.

After the formation of the Air Force Space Command in September of 1982 and that of the Navy in 1983 increasing activity is underway to establish an analogous command for the Army which is to be in charge of developing ground-based space weapons. In November 1983 the U.S. military leadership made the decision to form a Joint Space Command by the end of 1985. This central command authority was to be charged especially with developing, applying and controlling the military satellites, the Space Shuttle fleet, and other space systems, to include space weapons.[3]

The strategic space-based command, control and communication system could in a simplified way be described as three cooperating components:

a) The communication satellite system of the U.S. forces (DSCS) is used by the highest military and civilian authorities, the world-wide dispersed main commands of the strategic-operational forces, and the intelligence services for communication and strategic intelligence. Its nucleus is the World Wide Military Command and Control System (WWMCCS).

b) The U.S. Air Force command, control and intelligence system (AFSATCOM) is designed to assure communications between the U.S. Government, the Strategic Air Command, and the strategic bomber forces and land-based intercontinental nuclear missile forces allocated to the Strategic Air Command.

c) The U.S. Fleet system (FLTSATCOM) maintains communication with mobile forces, such as strategic aircraft, naval units, including the strategic submarines, aircraft for anti-sub action, etc.

By the late 80's the ultrahigh frequency system, MILSTAR, is to begin operating. Its task is to maintain effective control of the forces during nuclear war.

In January 1984 Reagan directed NASA to develop a permanent manned station by 1992. It is to assume the mission of a space-based command and control center for the entire network of military satellites, space weapons, and other systems. The costs are estimated at 8 billion dollars until 1992 (25 percent is to be assumed by the chief allies of the U.S.) and at 20 to 30 billion by the end of the century. The C^3I system also contains intelligence, early warning, weather, and geodesy satellites that operate in immediate contact with the offensive nuclear forces.

2. Satellite Systems as "Strength Multipliers" of Offensive Weapons

Weapons included in this group consist essentially of missiles that have been modernized since the mid-70s or are still in the process of development.[4] One main criterion of the effectiveness of these systems (besides range, destructive ability, flight duration, etc.) is their great precision in target engagement, especially with an eye on the versions of a "limited" and/or "long-lasting" nuclear war. Satellite systems are considered decisive for this purpose. The navigation satellites are of particular importance. In the 60's the Transit naval system was developed for the Polaris nuclear submarines. However, it is no longer sufficient to meet the needs of current U.S. nuclear doctrine, and for that reason an inter-service Global Positioning System (GPS), Navstar, has been introduced. To the extent this has not already taken place it is to provide the missile forces, especially the naval ones, the precision desired by the second half of the 80's of first strike weapons through position fixing and possible course corrections of missiles or warheads. The most important element of this system is the time differential, i.e. synchronized timing devices must be on board of the satellites and the weapon systems.[5]

Further systems of considerable importance for the precision of offensive weapons are:

--optical and electronic observation satellites for target detection on land (Systems: Big Bird, KH 11, Ferret);

--ocean surveillance satellites for naval target detection, to include command of anti-submarine warfare (White Cloud, Elint);

--early warning satellites that transmit information in case of a conflict to the fire control centers as to the extent enemy and friendly targets have been engaged (IONDS, IMEWS, Rhyolit);

--weather satellites providing information on atmospheric conditions (DMSP, Block 5D);

--geodesic satellites who, among other data, deliver data about the earth's gravitational field for compiling of detailed maps and target information (Geosat).

3. "Defensive" Systems Against Satellites and Missiles

Developments in the field in the 80's represent a qualitative jump in the militarization of space. Over the past decades the space systems essentially were deployed of "defensive/passive" missions such as communication, location, and surveillance of opposing systems etc. However, for the 80's and 90's there is the outline of a dangerous accelerated development and stationing of "offensive/active" space systems by the United States designed to effectively engage objects in space, in the earth's atmosphere, and on the ground. The mission of this system that can also be characterized as an offensive weapon strategic importance is to be action against satellites and other space systems, the elimination of the opponent's defensive systems and of his ground and naval strategic missiles, of command centers and other objects. The "defense" for this purpose is to be echeloned and composed of various technologies (various laser weapons, conventional and nuclear missiles, etc.) The destruction of missiles and rockets or of their warheads is to take place:

a) In the start phase when the rockets are moving relatively slowly;

b) Outside the earth's atmosphere, if possible before the warheads separate from the missiles (this stage, it is said, is also to be charged with destruction of all militarily active Soviet satellites);

c) At and after the re-entry into the atmosphere.

Within the U.S. nuclear war strategy this comprehensive system is to reduce an expected USSR counterstroke to the maximum extent and to make the conflict survivable for the United States. (an amplification of the "assured destruction" doctrine by a "guaranteed survival" doctrine of the United States). A 1982 Pentagon study posed the mission of destroying 1000 Soviet rockets in the first 250 seconds.[6] Of increasing importance are the deliberations in the United States to use these weapons for preventive attacks against the Soviet defensive potential. Since early 80's two main trends have been apparent in the United States in the acquisition of the space components of this system:

--The development of a conventional anti-satellite missile (SRAM/Altair III missile carried by a F-15 fighter. The first test took place in January 1984, the next one is to follow this fall. The system is to be ready for 1986/87. From that time on the USSR is to be threatened with "blinding" (limited control and intelligence opportunities with reference to the U.S. and command of friendly missile forces due to the action of anti-satellite systems).

--Development of laser weapons, especially of high-energy lasers, nuclear X-ray lasers, and particle stream weapons (projects include TRIAD, Dauphine, White Horse). These systems are to come into use in the 90's and later.

Push on Laser Weapons

The problem of laser weapons was the centerpiece of a speech by the U.S. President on 23 March 1983. At the time he directed that "comprehensive and intensive efforts toward a long-term research and development program" against the "Soviet missile threat" be begun, aimed at "the ability to intercept and destroy strategic ballistic missiles before they reach our or our allies' territory."[7]

Laser weapon research has been carried out in the United States since 1966 and several successful tests have been booked--destruction of flying surveillance drones (1973 and 1976); shooting down of three TOW anti-tank missiles flying at a speed of 800 km/hour (1978); destruction of a Thro missile without a warhead on the ground (1982); destruction of five Side-winder air-to-air missiles flying at about 3200 km/hour (1983); underground test of a nuclear-driven X-ray laser (1983).[8]

Immediately after the Reagan speech the U.S. Defense Department accelerated the development of strategic laser weapons. Research capacities and financial resources were concentrated on the development of a space-pased high energy short-wave laser. The nuclear X-ray laser has received increased attention.[9]

As a parallel development studies were commissioned from June until October 1983 that were to investigate the technological and security aspects of such an anti-missile defense system. A report on this topic became the basis for further decision by the U.S. President. The highlights of the report were:[10]

Support for the Reagan Concept

"Intensive technological development programs can lead to a potential ballistic anti-missile defense by the early 90's."

Political and Military Blackmail of the USSR

With the aim of "strengthening the military negotiating positions" of the United States, and "complicating and confusing Soviet plans for modernizing strategic nuclear forces" "technological demonstrations" are to be carried out as soon as possible, to include the underground nuclear X-ray laser tests and demonstrations of their applicability by 1988; demonstration of a chemical two to 10 MW laser by 1987/88; proof of the ability to locate and track Soviet ballistic missiles in the starting phase.

Costs

For the development of a multi-level system cost estimates were recommended, ranging from 1.8 to 2.6 billion dollars for 1985 fiscal year, to $18 to $27 billion from 1985 to 1989, and about $92 to $95 billion by 2000 for one of the components of the total system (estimates about the costs of the total system range from 550 to 600 billion dollars).

Administration

The anti-missile defense program and all activities associated with it is to be "administered within the Defense Department centrally by an inter-service command authority."

On this basis, after consultations with the military leadership and the U.S. Congress Reagan on 6 January 1984 issued a secret Presidential Directive 119 regarding development of a comprehensive research program for building space-based weapon systems against enemy nuclear missiles.[11]

In February 1984 the Defense Department requested $1.8 billion for 1985 ($1 billion in 1984, a planned $3.6 for 1986) for developing laser weapons. The Department of Energy requested $3 billion for a long-term program for expanding test areas for nuclear weapons. The major portion of the resources was said to be needed "for additional underground tests of laser or particle weapons," especially of nuclear X-ray lasers.[12]

On 27 March this year Air Force General J. Abrahamson was named director of the "Strategic Defense Agency" of the Pentagon, directly subordinated to the defense secretary. The appointment of Abrahamson--previously director of the Space Shuttle program of NASA, one of the areas of U.S. concentration for the militarization of space, demonstrates the close substantive and personnel ties between the Pentagon and the "civilian" NASA and between the U.S. space weapons programs.

At the spring meeting of the NATO Nuclear Planning Group this April the U.S. allies were informed by Weinberger officially of the plans for a space-based missile defense system. It was pointed out that part of the system "must be based in Europe in order to defend Europe."[13] Apparently the West European NATO members (similarly to the 1979 missile decision) are to be included in the acquisition of this anti-missile system, their dependence on the U.S. in the military sphere is to be increased, and they are to be incorporated to a greater degree in the U.S. nuclear first-strike concept. Considering the above, and in connection with the sharp rejection of the treaties outlawing anti-satellite weapons by Reagan in a report to Congress on 2 April this year representatives of several NATO countries expressed skeptical reservations and criticism regarding the U.S. plans for further space militarization.

In connection with the U.S. plans voices have increasingly been raised doubting the technical feasibility of a system interdicting all Soviet missiles, or believing that the system could be overcome by Soviet countermeasures. Reagan's theses of "defending population centers," "the diminishing role of nuclear weapons," etc. have turned out to be demagogic maneuvers to fool and weaken the world-wide anti-war movement, to achieve the agreement by the allies, and to discriminate against the USSR which, in spite of its renunciation of the first-use of nuclear weapons is exposed to the nuclear threat by the U.S.

Toward Treaty Violation

Since the practical opening of space in the 50's the Socialist states have stood for an exclusively peaceful use of space and the prevention of its militarization in any form. In discussion with capitalist states, with the United States, a series of agreements was reached representing intermediate steps on this course:[14]

--1963 nuclear test ban treaty, prohibition of nuclear tests in the atmosphere, in space, and underwater;

--1967 space treaty, prohibition of stationing nuclear weapons and other mass destruction devices on celestial bodies and in orbit;

--1972 AMB treaty, limiting the number of anti-missile systems in the U.S. and USSR and forbidding new acquisitions (additional protocol of 1974);

--1977 environmental convention, prohibition of military or other hostile means for influencing the environment (includes space);

--SALT I and II or 1972 and 1979, prohibition of national control resources (such as satellites).

The unlimited agreement between the U.S. and USSR about limiting anti-missile systems is one of the most important international legal barriers to the U.S. plans for militarizing space, especially to the development and stationing of a novel anti-missile system. The treaty quite generally defined an anti-missile system as a "system for engaging strategic ballistic missiles or their elements on a flight path" (Article II). Both sides recognized at the time that a limitation of these systems is an important factor for limiting the strategic arms race and for reducing the threat of a nuclear war (Preamble). They undertook to limit the systems of their countries, not to expand them, and not establishing a basis for them (Article I). The number of the systems, consisting of anti-missile missiles, launching pads and radio control stations, was limited to two for each side (Article III) and the additional protocol of 1974 reduced the number to one each. The parties undertook "not to establish, test, or maintain anti-missile systems or their components on the sea, in the air, in space, or mobile systems on land" (Article V). The future possibility of anti-missile systems "based on other physical principles" than current systems (such as high-energy lasers) was taken into account and for that event discussions were provided for aimed at "specific limitations of these systems and their components." (Joint declarations, paragraph D; Article II). It was further agreed not to transfer anti-missile systems or their components to other states, and not to station them outside national territory (Article IX), not to interfere with the national control resources of the other side, and not to apply deliberate deception measures that would hinder the control of the treaty stipulations (Article XII).

The Reagan Administration violates the spirit and the letter of several treaty provisions and is practically preparing for its massive violation. Its action is concentrated in the following areas:[15]

--demagogic propaganda on behalf of an anti-missile system said to be the basis and prerequisite for limiting nuclear armaments and the threat of war;

--accelerated research and development of a space-based missile defense system concentrated on laser weapon development, as well as tests of weapon components in space (target device for laser weapons tested on board of the Space Shuttle);

--acquisition, testing and maintenance of individual components of a missile defense system (development of multiple warheads for anti-missile missiles, testing of the Minuteman ICBM for suitability as an anti-missile missile, radio location station on Shemya island, Pave Paws radio station on the Atlantic and Pacific coasts, development of mobile radio locating stations.

--rejection of negotiations and treaties for limiting or prohibiting development and stationing of space weapons, including laser weapons for anti-satellite and anti-missile defense;

--long-range planning and instigation of a campaign to station ground-based anti-missile weapons outside U.S. territory, especially in West European NATO countries;

--hindering treaty control by covering the start silos of the anti-missile rockets.

Conclusions

1. The U.S. initiated militarization of space is designed for a long term and is pushed by the Reagan Administration with a high degree of intensity.

2. The entire nuclear doctrine of the Reagan Administration is intimately linked to the functions of various space systems and depends on them. Accordingly, U.S. space activity is to a decisive degree linked and subordinated to the goals of its nuclear doctrine. This trend toward linkage is increasing. A high point will be reached in the second half of the 80's when considerable strategical nuclear weapon systems and qualitatively new space systems are to be introduced.

3. Resistance by the U.S. to reach further limitation or prohibitions in the area of space demilitarization and to engage in negotiation with the USSR to that end has considerably increased since the beginning of the Reagan Administration. It has culminated in the position of subverting or violating existing treaties and not concluding any treaties that hinder U.S. military goals in space.

4. The total concept of the Reagan Administration--nuclear doctrine and space militarization as well as the aims derived from them--would upset the existing military strategic balance between the U.S. and USSR. However, in view of the mighty military and economic capacities of the Socialist community it is destined to fail. "The Soviet Union is a decisive foe of any arms race, including the cosmic one. At the same time it must be obvious that the USSR in view of the threat from space will be forced to take measures to reliably vouchsafe its own security."[16]

FOOTNOTES

1. K. Chernenko, "Reply to American Scientists," NEUES DEUTSCHLAND, 21 May 1984.

2. Caspar Weinberger, "Annual Report to Congress, FY 1983" Washington 1982, p III-77.

3. Cf. F. Hiatta, "Joint Chiefs Reportedly Recommend Unified Military Command for Space," INTERNATIONAL HERALD TRIBUNE, 19/20 November 1983.

4. See e.g. "From where comes the threat to peace?" 2nd rev. ed., Moscow, p 17 ff.

5. See Wolf/Hoose/Dauses, "Militarization of Space" Koblenz 1983, p 95.

6. See P. Tyler, "Secret Study: U.S. Could Test Laser Weapons in Cosmos by 1993," INTERNATIONAL HERALD TRIBUNE, 28 Mar 1983.

7. Ronald Reagan, "Peace and National Security," DEPARTMENT OF STATE BULLETIN, Washington, April 1983, p 14.

8. See "Laser Research and Applications," Washington, Nov 1980, p 20; WIRELESS BULLETIN, Washington, 27 Jul 1983.

9. W. Pincus, "U.S. Pushing Anti-Missile Space Lasers," INTERNATIONAL HERALD TRIBUNE, 30 Aug 1983.

10. C.A. Robinson, "Panel Urges Defense Technology," AVIATION WEEK & SPACE TECHNOLOGY, 17 Oct 1983, p 16 ff.

11. See M. Getler, "U.S. Steps up Research on Space Armys," INTERNATIONAL HERALD TRIBUNE, 27 Jan 1984.

12. W. Pincus, "U.S. Preparing New Test-Site Area for Expanding Nuclear Program," INTERNATIONAL HERALD TRIBUNE, 4 Apr 1984.

13. "Weinberger Tells NATO that U.S. Rejects Anti-Satellite Weapons Ban," INTERNATIONAL HERALD TRIBUNE, 4 Apr 1984.

14. See "Documents on Disarmament 1917-1976," Berlin 1978; "Arms Control and Disarmament Agreements," Washington 1980.

15. See, e.g. "Soviet Aide-Memoire, U.S. Violate International Commitments," NEUES DEUTSCHLAND, 31 Jan 1984.

16. K. Chernenko.

NATO AIR-GROUND FORCES COOPERATION ASSESSED

East Berlin MILITAERWESEN in German Sep 84 pp 74-78

[Article by Lt. Col. R. Spitzner, engineer: "The Cooperation of NATO Air and Ground Forces on the Battlefield"]

[Text] The stationing of action-ready NATO forces in the vicinity of the border and the precipitous increase in the nuclear first-strike capability of the United States in Europe unmask the aggressive intentions of NATO, hidden behind its mandatious phrase, to "defend by attacking." In this NATO concept of "forward defense" the air forces have been assigned priority operational technicians. They are to conduct the offensive air war over the territories of Warsaw Pact nations with the goal of eliminating their air and ground forces. In this regard, STUTTGARTER ZEITUNG of 18 August 1983 quoted from a study of the new concept dealing with the conduct of air-land operations in Europe and entitled "Air-Land Battle," which the United States intends to introduce within NATO in the middle of the 1980's: "What we are striving for is the possibility of an early initiative toward offensive actions involving air forces and ground forces.... The defense must, therefore, begin far forward and proceed from thence aggressively in order to destroy the enemy attack squadrons and, simultaneously, slow down the reinforcing squadrons, to tear them apart, scatter them, disrupt them or destroy them."

The implementation of this concept of closely coordinated air-land operations in NATO, whose principal content consists in carrying the attack into the depth [of the enemy] through the combined use of land and air forces with a high attack tempo, in a mobile manner and with great firepower[1] is connected with an essential additional upward revaluation of the entire forward strategy. Its aggressive nature is expressed, among others, in the principles of cooperation between NATO air forces and ground forces. In order to utilize the capability of NATO air forces in rapid action and to concentrate firepower over great distances the concept of combined air operations was developed within the framework of NATO.[2] In addition to the link between general missions of the NATO air forces within an air operation, the linkage of air operations with operations of ground forces is being assigned increased significance. Through the achievement of temporary air supremacy, particularly in the direction of the main strike of the NATO ground forces, a significant contribution is to be made toward achievement of their freedom of maneuver.

Key Point of Cooperation

The NATO leadership demands that every military measure, regardless of which military service may be involved, be aimed at the common goal to be achieved and is to be coordinated within the command staffs with measures undertaken by the other arms of service. This receives particularly detailed attention with regard to the actions of NATO air forces and ground forces. The following are identified as key points for the cooperative effort (Illustrations 1 and 2):

1. Direct air support to a depth of about 30 km;

2. Battlefield interdiction to a depth of approximately 100 km;

3. Air defense over the battlefield;

4. Joint suppression or destruction of enemy air defense in the area close to the front.

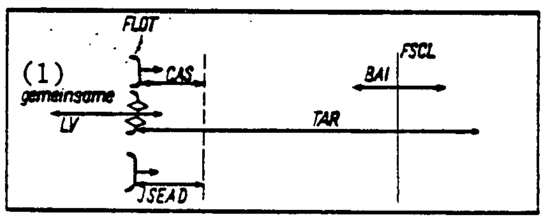

Fig. 1. Tasks of cooperative efforts on the battlefield (schematic): FLOT--Forward Line of Own Troops; FSCL--Fire Support Coordination Line; CAS--Close Air Support; JSEAD--Joint Suppression of Enemy Air Defense; BAI--Battlefield Air Interdiction; TAR--Tactical Air Reconnaissance; (1) combined air defense.

In the interest of solving these tasks, NATO military authorities place great value upon the effective, precisely coordinated deployment of all reconnaissance facilities operated by ground forces and the air forces.

According to the views held in NATO, the most effective air support can be achieved through direct air support as well as through battlefield interdiction and interdiction of the operations area. Direct air support has the principal goal of destroying enemy armored forces on the battlefield. Air attack forces have priority assignments to operate against those enemy troops who are directly engaged in battle operations. Cooperation between air and ground forces is intended to facilitate the laying down of coordinated and concentrated fire, as well as planned and unplanned mutually coordinated operation in all phases of direct air support. Toward this end, methods which require a minimum of time, are jamproof and facilitate fire control over maximum distances are recommended.

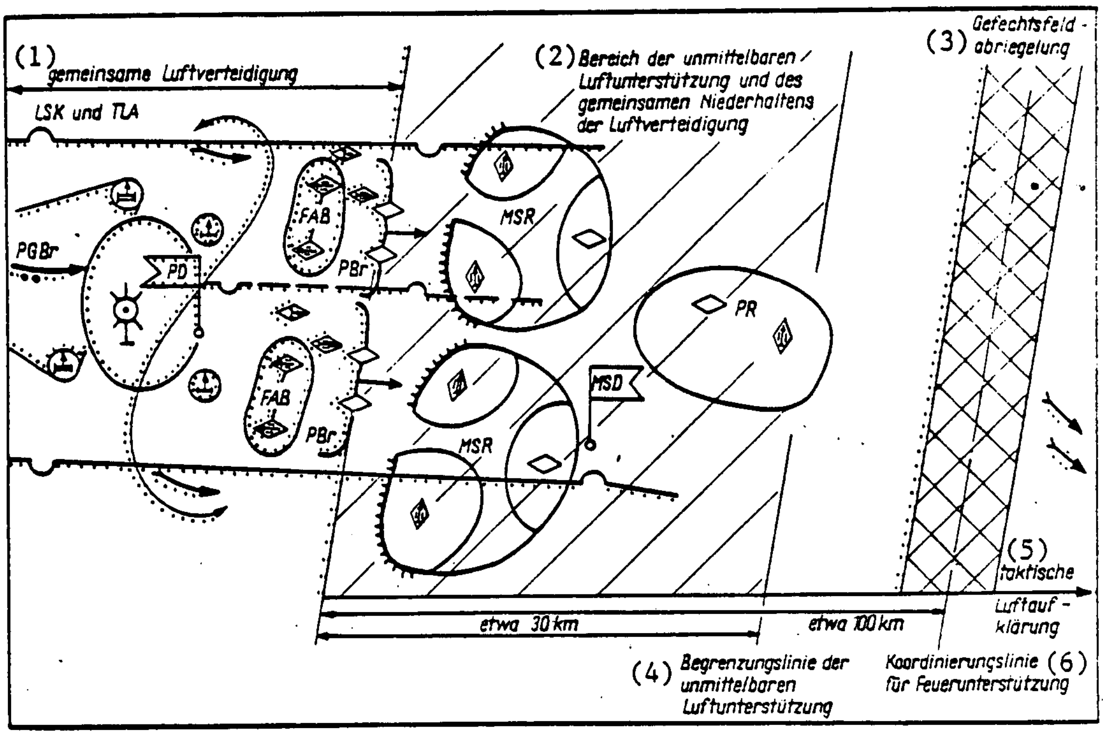

Fig. 2. Tasks of cooperative action on the battlefield (variant):

Key:
1. joint air defense
2. area of direct air support and joint suppression of enemy air defense
3. battlefield interdiction
4. limit of direct air support
5. tactical air reconnaissance
6. coordination line for fire support

Battlefield interdiction is primarily intended to prevent or delay the introduction of following enemy echelons which have not yet had combat contact.

Coordinated fire control of NATO air and ground forces on the battlefield is supposed to make it possible to utilize the combat characteristics of every weapon system to combat targets both on the ground as well as in the air, in other words both in the interests of air defense as well as in suppressing or destroying enemy air defense facilities in the area near the front.

NATO military authorities intend to achieve this through the close cooperation of antiaircraft air defense missile units ("Improved Hawk," "Nike Hercules" or "Patriot" weapons systems) with air defense means operated by army corps or divisions ("Roland," "Chaparral," "Gepard," "Sergeant York," etc.) as well as through the deployment of air defense pursuit aircraft. Toward this end they demand timely deployment coordination by air defense focal points, appropriate guidelines for fire control, as well as the planning of variants for the deployment of air defense facilities with the full utilization of concealment possibilities of active means of air defense.

The deployment of (combined weapons), as demonstrated by the Israeli aggressors, underscores the great role which imperialist military authorities ascribe to the air forces in the solution of fire missions involved in achieving operational and strategic goals. Universal and careful organization of the breakthrough on the part of the air forces through the enemy air defense, including the use of unmanned reconnaissance drones and means to suppress or destroy troop air defense facilities were characteristic in that operation. The NATO leadership also requires that all fire or engagement possibilities be utilized[3] to facilitate the operations capabilities of their air forces in the area near the front. This is said to be urgently necessary because of the concentration and combat opportunities enjoyed by enemy troop air defense facilities.

Organization of Cooperation

According to NATO concepts effective cooperation of both arms of service on the battlefield assumes optimal organizational principles on the basis of a proven organizational structure, a high status of training for commanders of all levels, as well as the availability of suitable control and communications facilities. Through interoperability and compatible weapons and control systems the necessary foundation for the cooperation of different national contingents of the air and ground forces is to be created within the framework of NATO. Integrated automatic information and commanded control systems (for example, "NADGE," "GEADGE," "EIFEL," "DISTEL," 458L), whose deployment possibilities in the planning as well as in the commanded control of combined air attack and air defense operations are being constantly expanded, are in use.[4]

The cooperation of NATO air forces and ground forces is depicted in the control diagram shown in Illustration 3. The following tasks are solved:

a. Planning of actions,

b. Mutual information exchange,

c. The call for forces and means to provide direct air support,

d. The tasking of subordinates,

e. The reporting activity.

Planning of actions for offensive air support is based on the principle of tasking received from the superior NATO staff at the combined army group/ ATAF (JCOC) level. In addition, possibilities for unforeseen deployment are kept open. Accordingly, decisions are made with regard to preplanned and immediate direct air support missions. The information exchange between both arms of service in organizing deployment is handled by liaison officers of the air forces and the ground forces. Operations groups are used as a link in coordinating NATO air force and ground air defense combat operations between army corps and the ATAF.

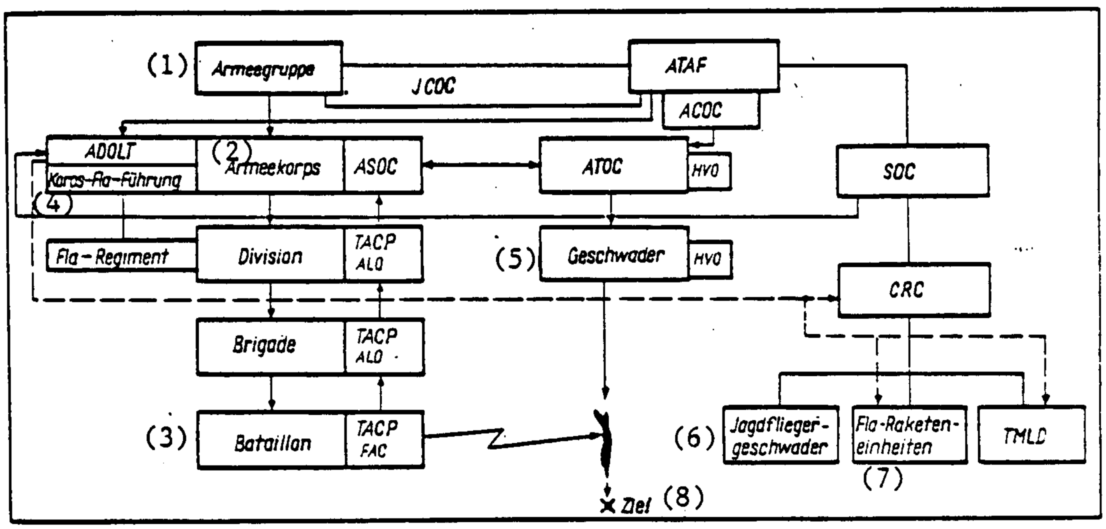

Fig. 3. Control schematic of cooperation among NATO air forces and ground forces: ATAF--Allied Tactical Air Force; JCOC--Joint Command Operations Center; ACOC--Air Command Operations Center; ATOC--Air Tactical Air Control Party; ALO--Air Liaison Officer; FAC--Forward Air Controller; HVO--army liaison officer (representative of ground forces with the air forces); SOC--Sector Operations Center; CRC--Control and Reporting Center; TMLD--very low altitude reporting and control service; ADOLT--Air Defense Operations Liaison Team.

Key:

1. army group	5. squadron
2. army corps	6. fighter aircraft squadron
3. battalion	7. antiaircraft missile units
4. antiaircraft control	8. target

Where necessary, a request is submitted (to make available planned designated direct air support). Every command level can submit a request. The provision of air support is decided on the level of the army corps command post for air attack (ATOC)--if it can provide the requested forces and means within the framework of the deployment which have been attached to it; otherwise, the decision is made by the army group/ATAF (JCOC). In the event of preplanned air support the request is passed through all superior levels and is verified within the staff of each. An example is shown in Illustration 4. A request for direct air support for the armored infantry battalion of the first echelon is relayed, via conventional communications channels, along the line of the forward air control officer--liaison officer for air forces within the armored infantry brigade (ALO)--air force liaison officer at division level (ALO) until it reaches the command post for air support at the army corps level (ASOC). From there, after having been processed through integrated automated information or control systems, it is relayed, via data link, to the air attack command post of the ATAF (ATOC). The forward air controller makes a request for direct air support in a standard message format via radio directly to the ASOC. Subsequent processing takes place as already described. The ATAF (ATOC) then tasks the appropriate fighter-bomber squadron with providing the air support since it is only the ATAF (ATOC) whch is familiar with the types of armaments to be selected for the individual missions. On the basis of the request in hand, it assigns the targets, the target areas and the forces to provide individual air support missions. Aircraft which are deployed for immediate direct air support are on 15- or 30-minute alert.

Upon confirmation by the superiors, the ATOC communicates to the battalion, via the ASOC and the other identified command levels, the time of the arrival of the fighter-bomber aircraft over the target and all other important data regarding the deployment. Along with their missions, the aircraft pilots are briefed by the ground force liaison officer on the situation of the troops.

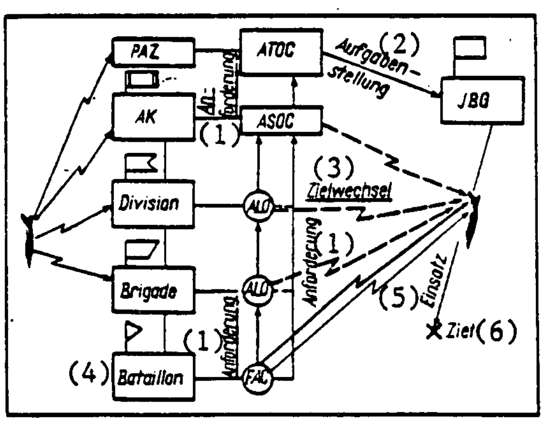

Fig. 4. Control schematic of immediate action and preplanned action: PAZ--direction-finding and evaluation centers; thick lines and underscoring: preplanned action.

Key:
1. request
2. tasking
3. target change
4. battalion
5. action
6. target

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After takeoff the flight leader or the squadron commander reports the over-flight of the designated control point by radio and his message is also intercepted by the ALO and the ASOC. Once the flight leader or squadron commander has established ratio contact with the forward air controller the latter gives him detailed target directions (target description, type of attack, approach direction, position of friendly troops, etc.).

Following the action the squadron commander reports mission completion to his superior. This message is received by the air force liaison officers and by the army corps command post for air support, as well as by the direction-finding and evaluation centers. Additionally, after landing the squadron commander is debriefed regarding the situation of the ground forces as part of the flight intelligence evaluation.

FOOTNOTES

1. E. Heldmann, "The Rogers Plan--A NATO Concept for Conventional Warfare in Europe," MILITAERWESEN, No 6, 1983, pp 79ff.

2. W. Raue, "'Combined Air Warfare Operations' According to the FRG Luftwaffe Leadership," MILITAERWESEN, No 1, 1982, pp 71ff.

3. This means primarily making comprehensive use of the new weapons systems (cruise missiles, "Pershing 2" missiles, zone fire weapons, precision-guided munitions, etc.) the use of which can achieve a substantial increase in firepower, range and hit accuracy, as well as utilization of electronics for target acquisition, reconnaissance and battlefield control and the use of modern means of electronic warfare.

4. W. Raue, "The Tactical Air Warfare Potential of the NATO Command in the Baltic Region and in Central Europe," MILITAERWESEN, No 11, 1983, p 77.

INFORMATIONAL NEED OF COMMANDERS EXAMINED

East Berlin AUSBILDER in German Feb 85 pp A34-A39

[Article by Lt. Col. Jurgen Funfstueck: "And When Information Only Flows Sparingly--On Important Conditions of Successful Leadership"]

[Text] Regardless of which tasks we wish to solve we always require certain information for this purpose. Yet where do we obtain it? This is a question which occupies every commander, particularly when he must evaluate the situation in his sector in order to, for example, make a decision to secure the frontier.

Actually, what is an item of information? In the dictionary we find the definition of instruction, enlightenment, information or intelligence. Young commanders sometimes conclude from this that they must receive information because they think that one is instructed but one receives information. This is a one-sided view. Because we must be able ourselves to give information, for example, during the course of an information report. And we must inform ourselves with regard to the activities of the Federal Border Guard in the border sector opposite to us. In other words: we must acquire a portion through reconnaissance (and study) and we receive other portions from our superior. This is always information which we require in order to fulfill our mission.

Accordingly, to be informed is a necessary prerequisite for giving precise orders and for the equally precise execution of orders by subordinates. Everyone must see to it that they are appropriately informed and, as a superior officer, must be responsible for informing subordinates.

Make the Right Choices During Information Acquisition

Everyone surely knows the situation in which he has felt a sharp need for information, the need for answers to questions of the political life and his own military activities. Let us think of the students shortly before a company exercise. What doesn't the soldier want to know at that time? He then hangs on every word, even on the tone we use in saying one thing or another.

If we want to satisfy the need for information this means, primarily, that we must ourselves be universally informed. We need to show a high degree of inforemedness. If we analyze this concept then we understand it to be a status of knowledge regarding facts and conditions, regarding facts and opinions, regarding weapons and equipment, regarding parameters and performance data, regarding other topics involved in military life, in societal development and in special activities.

As we can see, the informedness of the soldier and the leadership exercised by the superior are closely connected. How can we evaluate this interconnection?

The ability of the superior to impart information to his subordinates, which puts them into a position of being able to fulfill their missions with political awareness and a high degree of military mastery, essentially characterizes the leadership responsibilities of the noncommissioned officer, the warrant officer and the officer in the squad and in the company. Army General Heinz Hoffmann once said:

"Let us consider just those changes in our educational system which have taken place in recent years and are still occurring; how better educated the young draftees will be when they enter our units in the future. Or how much experience in socialist collectives and in working under modern industrial conditions involving rationalization and automation, assembly lines and production lines the young specialist will already bring with him into the army today! These clever and achievement-oriented soldiers want to be challenged and recognized; they primarily want to be led by noncommissioned officers, warrant officers and officers whom they can respect and in whom they can have confidence, who are masters of their specialty and in the handling of subordinates to no lesser extent that the instructors at the higher school level or the foremen and engineers in enterprises.[1]

Comprehensive information is an important prerequisite for leadership activity, since subordinates cannot grasp the essential nexus of things, or experience difficulty in so doing, with a dirth of information and the necessary insight of all concerned, the subordination to the will of the superior, can then only be attained through formal means.

Information and Information Need--Sometimes a Contradiction, What To Do?

We return from an official meeting full of information. We relay it. Yet not every item of information always achieves the desired effect. One of the subordinates does not react at all and another even says openly: "I'm not interested in that." Is that sort of thing unthinkable? Only if we do not recognize that we have done something wrong!

Information alone does not lead to a high level of leadership activity; what is important is the capability to select information purposefully, to evaluate it, to process it and to make it available to other persons; in other words, not merely to relay it. Toward this end we must clarify for ourselves the volume of necessary information for a given task. This is the first step toward mastery of the "how." An example: before I give information to a sentry or border guard, I must take into account the degree of informedness of the soldiers. Only then can I issue commands, issue directives and clarifications. We can inculcate a first rule:

The need for information is to be determined in as concrete a form as possible.

For mental work this means that:

a. The degree of informedness must be recognized prior to solving the task (for example, during a search operation: Have the soldiers mastered this tactical action? To what extent are they informed regarding this fact?);

b. Determinations must be made as to which facts are new to the subordinates (What are they not yet informed about? Where must I correct myself?);

c. Thought must be devoted to what are necessary repetitions and what can be assumed in advance to be known;

d. Tests must be made to see which items of obvious information I can forego without missing out on necessary instruction.

Information which transcends the immediate task is of special significance to us where information deals with the class struggle situation in the world, societal development in the GDR, with Border Guard troops, as well as with our own arm of service. I call this basic information. We should remember the following:

The subordinate draws this information from a multiplicity of information sources. These include political education, continuing social science education, the mass media, cultural and political events, topical political information, personal political conversations--but also conversations with comrades.

A practice of experienced superiors which is worthy of emulation is the combining of information designed to solve military missions, such as border guard and sentry duty and combat service with information on overall societal connections in order to achieve politically conscious action and in order to evaluate situations in the future.

Let us move on to the next problem in this connection. Why does one person sometimes know more than another? Why do rumors still occupy a firm place now and then? Why does the "small soldier's radio" [barrack room rumor mill] dominate in some places? Perhaps the superior officer should channel his attention toward avoiding "blockages" in the information flow in such cases. (We are talking here about information which is actually intended to be passed on.) Many a squad leader, knowingly or unknowingly, retains for himself that which he must pass on. Consequently, there is another rule:

Constantly secure the information flow!

Here we are dealing on a priority basis with the transmission and exchange of information between superiors and subordinates, subordinates, squads and platoons of a company.

Thus, many a critical remark with respect to socialist competition is frequently based on an inadequate information flow. An example: the principal method of socialist competition is creative competition in the daily service between individuals. The focal points for further work, the actual status of results, critical evaluation of results or failures, praise and criticism are unthinkable without the availability of specialized information. Consequently, squad leaders should: daily connect the evaluation of the competition with an evaluation of the manner in which missions are fulfilled! (Competition is evaluated in squads and in platoons on a weekly basis and on the company level at 14-day intervals). It should be considered that in evaluating or considering the competition or the way in which missions are fulfilled, objective evaluation exerts a great influence upon the information need of subordinates and, simultaneously, is a prerequisite for the continued conduct of competition. We pull the rug out from under rumors and speculations when we consider the many steps involved in passing the information to the soldiers. If there are several intermediate recipients they transform the information, in other words, they change its content. In this connection I'm reminded of a thought expressed by Soviet psychologist Rubinstein. He said that external factors act via internal conditions. They are "broken" by them. Each intermediate recipient passes on the facts as he has understood them.

For leadership activity, knowledge of this condition means not only being clear regarding the source and recipient of information but also regarding the content, volume, as well as the manner in which it is relayed.

If, as required by official regulations, we ask that each fulfilled command is reported to us and if we check on our subordinates by conducting personal conversations with them, then we do not find it difficult to recognize information losses and to avoid future "blockages" in the information flow.

Knowledge of the need for information and a constant flow of information makes it possible to control the information need within the collective and to develop it. Regardless of which task a squad or platoon has to fulfill, the comrades always need differentiated task-oriented and concrete information. In addition, they also need basic information. This fact was already referred to earlier. The superior officer must not be complacent with respect to what type of information need prevails in the collective. He must, in other words, observe yet a third rule:

Know and develop information requirements.

The quick answer of a comrade to the effect that "I understand, no problem!" should stimulate the superior officer to thinking about the manner in which he made the assignment. He should ask himself: Does this comrade have any information requirements with respect to the situation, the problem, or the task to be solved at all?

Or in similar situations [he should ask himself]: Why does my information not satisfy the information requirements of the soldiers, the noncommissioned officers, or officers?

Why is there such an extreme amount of satisfaction or dissatisfaction with regard to the information?

How and in what connection can I arouse those information requirements which serve to solve the military mission?

What information needs exist which do not serve my task?

What specialized information needs should I stimulate in conversations?

In any event, we must pay attention to the following:

Extreme satisfaction or dissatisfaction with information indicate disruptions in socialist relationships, in the military collective and between superior and subordinate!

This is a finding which sounds very harsh and will not always be immediately accepted by everyone. I will come back to it.

Satisfaction or dissatisfaction with information is also influenced by social factors, education, professional age, and military qualifications. Comrades with a solid professional and military education as a rule have a larger need for information and are less satisfied with information. This is also true of reservists who are professionally active for quite some time and who have had to solve important problems within their families and in society. Consequently, the precise knowledge of the personal development of every comrade, his attitudes and opinions, is essential for the realistic evaluation of his need for information.

Sometimes superior officers estimate the information satisfaction on the part of their subordinates to be higher than it actually is. As individual military leaders we often lean toward a dirth of information activity. But particularly information which is aimed at developing a socialist consciousness and social activities is in need of being in greater detail. To make tasks personally significant to comrades, to interest them and to stimulate their curiosity means, depending on the situation and the content of the information, to supply limited or detailed information.

It pays to consider how information requirements can be further developed and how we can secure an uninterrupted information flow. Toward this end, we need to plan nothing extra but we should constantly be attentive and open with respect to those problems which arise from the solution of tasks in the border guard service and in combat training.

Suddenly Only the Order: "Border Guard Duty Extended!"

I have now spent pages speaking about adequate information. Yet recently the following incident occurred in a border guard company: without explanation the guardposts received an order calling for them to secure their post areas for a longer period of time. Some became visibly distressed and their attention declined. The reason was clear: this time they had not been informed, had not been briefed on the connecting events. In other words, the superior officer had not been up to his leadership task.

Is this true? Is it so simple? What role does the actual lack of information play in combat? Is it not so that during war the soldier must often act without adequate information? We should prepare ourselves for this situation.

We all know of examples from the Great Patriotic War. Many border posts were isolated from the outside world for long period of time (the fortress at Brest). They did not know where their own troops were fighting, they did not know whether help would come. But they held and fought to the last breath.

If we imagine the possible course of combat actions in a military base we will see that there are many factors which have an extraordinarily strong and lasting effect on our border guard soldiers; let us think of the employment of weapons of mass destruction by the enemy, let us consider the high kill and physical effect of conventional weapons, the rapid change in the situation, the large time-frame and spatial extension of combat actions, let us think of the many losses. The company commander has only a small overview of the situation, he has a shortage of information. This is part of combat and can mean that the psychological status of border guard soldiers and the entire collective can deteriorate very rapidly. Consequently: whether in combat or involved in other types of border security, we shall attain success only if we increase the action possibilities of the company or the border post--including factors involved in psychological potentials (attention, a talent for observing, strength to overcome fear) in a goal-oriented manner. We must be armed, we must also train for action under conditions in which there is a shortage of information.

In so doing we should not disregard the following experiences: psychological events, that is to say the mental processing of environmental influences, is strongly influenced by experiences in social relationships, the cohesion of the collective, the social role of each soldier. Which one of us has not already observed that in danger situations or in situations where there is a shortage of information, the individual sentries feel themselves drawn to the guard commander, the soldier feels himself drawn to the platoon leader and to the squad leader. They hold on to that superior, and sometimes to a particular soldier, who appears to them to be the strongest. The entire squad then acts in accordance with the positive or negative conduct of this "role model."

Communal attitudes are formed rapidly and intensively. In this manner both positive as well as negative influences are exerted upon conduct and experience. Let us stay with an example. The sentry who must secure his post for a longer period for reasons which are unknown to him can develop the will to observe still better than heretofore, to camouflage himself still better because he knows that he has not received this combat mission without reason. However, he can also become upset about the prolongation of his service time (because, perhaps his girl friend is waiting for him) and, for that reason, he can neglect his vigilance.

The basis for psychological stability, in situations where information is in short supply as well, is combat security, firm conscious military discipline, tenacity and self-control, courage, bravery and a willingness to make sacrifices. Superior officers, party members, these must be the role models in the military collective toward which the soldiers orient themselves. To create combat security means to forge military virtues in every border service component, in every hour of instruction, in every combat firing exercise and measuring them against the merciless yardsticks of combat.

FOOTNOTES

1. H. Hoffmann, PARTEIARBEITER, special issue on the occasion of the 12th Delegate Conference, February 1981, p 73.

DEPLOYMENT OF PARATROOPS BY HELICOPTER DESCRIBED

East Berlin AUSBILDER in German Feb 85 pp A12-A15

[Article by Cpt. Bernd Kraemer: "How the Flight Commander Decides to Secure the Deployment of Paratroopers"]

[Text] It is 0700 hours. Captain M., the commander of a helicopter flight, receives an order to report to his squadron commander. The latter is already consulting in his office with his deputies. After Captain M. has reported to his superior he receives the following combat assignment:

"We have the mission of covering the transport helicopter squadron and of securing the deployment of paratroops. Your mission, comrade Captain, is to free the drop zone from the effects of enemy weapons. In doing so, you must use all possibilities to evade enemy antiaircraft facilities.

"On the map before us we can see the front. It roughly corresponds to the course of the river. It was possible to halt the enemy attack and he has gone on the defensive. Our troops are preparing a counterattack. The forcing of the water obstacle requires that a bridgehead be established on the enemy bank.

"I await your decision at 0800 hours. The action time for your flight is 0930 hours. At that time, the motorized infantry and armor will be forcing the water obstacle. Artillery preparation will have been completed shortly before that time. You determine the takeoff time for your flight."

Captain M. reads through the mission outline once more. He studies the tactical situation and informs himself with regard to the following items on the basis of the map:

a. The terrain relief (for example, important landmarks and obstacles),

b. The course of the main line of resistance and the through-flight corridors,[1]

c. The position and actions of friendly troops,

d. The defensive position of the enemy,

e. The possible antiaircraft facilities of the enemy and their positions (Figure 1).

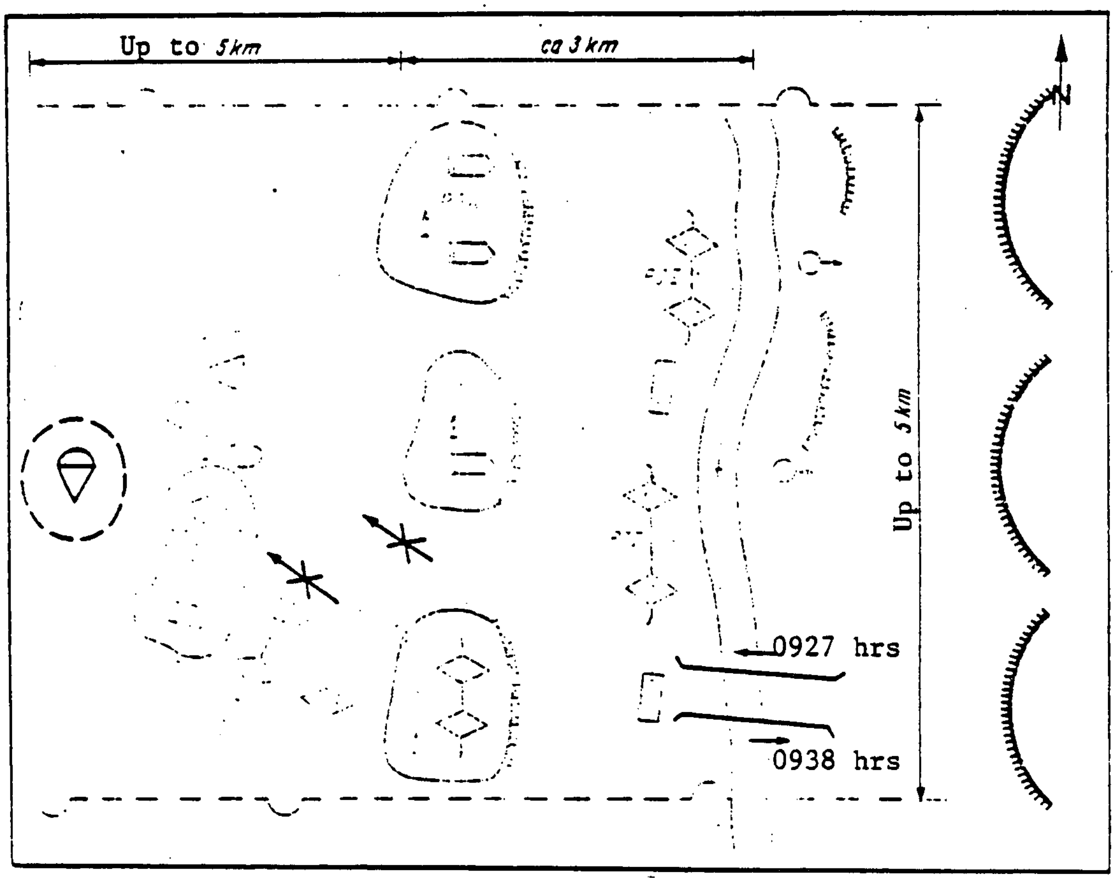


Fig. 1. Possible position of "enemy" and operations area of helicopters.

He asks the meteorologist to give him the probable weather conditions in the operations area for the planned flight time. He pays particular attention to conditions of visibility, the cloud cover (the ceiling), wind conditions, as well as to possibly dangerous weather phenomena.

At this point, Captain M. evaluates all available flight security materials (data, location and frequencies). After noting and organizing everything he clarifies the situation for himself: How can I rendezvous with the transport helicopter squadron under these weather conditions (visibility conditions) and given this terrain relief? He identifies specific landmarks and marks them with predetermined times and sees to it that the flight does not take place in valleys below mountain peaks or over large, level and widely visible flat areas, so as to evade enemy troop air defense and infantry weapons. Captain M. recognizes that a flight path through sharply broken terrain with constantly changing courses and one which takes him over mountain peaks is favorable. As they approach the front line, they will fly at extremely low altitudes. He determines a combat course of approximately 320° for the combat mission (0930 hours) in order to have the sun at his back at the time of the attack.

As they discuss the mission, the captain warns his crews not to fly between obstacles (primarily in forest lanes or firebreaks) under any circumstances, since, according to the weather forecast, visibility will not be much greater than 3 km and the danger of collision is very high. Furthermore, strong troop air defense activity may be anticipated. He identifies the types of enemy antiaircraft facilities which they can expect to encounter. In doing so, he refers to NATO antiaircraft facilities which play a significant role in NATO aggressive preparations against the socialist community of states.

NATO Antiaircraft Facilities (Selection)

	Antiaircraft Missile Complexes					
Indicator	"Stinger"	"Redeye"	"Blowpipe"	"Chaparral"	"Rapier"	"Roland 2"
Maximum range (km)	5	3	4	4	6.5	6.2
Launchers/rockets	1	1	1	4	4	2
Radar station	--	--	--	X	X	X
Simultaneous target combat capability	1	1	1	1	1	1
Hit probability (%)	80	70	80	75	90	95
Minimum action altitude (m)	20	50	50	30	20	20

	Self-Propelled Antiaircraft Guns, Air Defense Guns and Armored Personnel Carriers			
	"Gepard"	"Vulcan"	L-70	"Marder"
Maximum firing distance (km)	11	7.5	12.6	3
Favorable firing distance (km)	3.5	0.5	3.0	Up to 1.5
Readiness to fire (sec)	7	10	120...300	1
Number of tubes	2	6	1	1
Radar station	X	--	X	--
Caliber (mm)	35	20	40	20

Now, Captain M. once more discusses the difficulties involved in extralow altitude flight. He particularly points out:

a. The heavily limited field of visibility,

b. The increased demands upon helicopter copilots (with respect to navigation and in recognizing obstacles, particularly of birds),

c. The limited function of flight security devices,

d. The increased amount of concentration required in flying at this altitude and the concomitantly high psychological and physical stress this causes (it must not lead to a subsequent decline in concentration during the actual combat mission).

To help them fulfill their mission in a comprehensive manner, the captain occupies himself intensively with the order of battle of his flight during the forcing of the main line of resistance. It must assure that:

a. The helicopters are well capable of maneuvering among each other,

b. No collision occurs between helicopters and ground obstacles,

c. The crews constantly observe the airspace (assignment of observation sectors within the flight),

d. Ground targets can be engaged singly or jointly,

e. The leader can at all times be covered by the followers,

f. A repeat attack is possible.

Captain M. decides on an order of battle involving a column of twos in line right. After overflying the main line of resistance and overcoming enemy antiaircraft facilities, they will strike the drop zone directly with unguided missiles. The repeat attack will be flown in pairs (Figure 2).

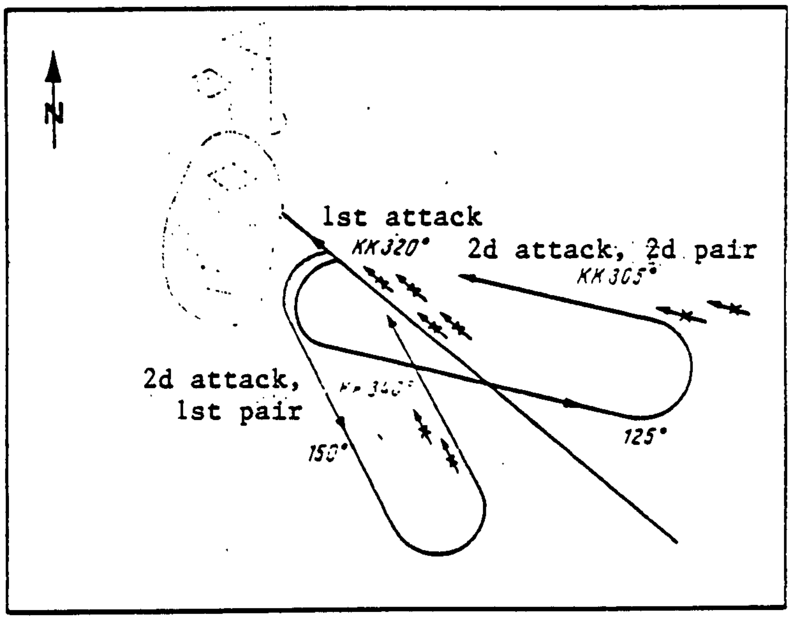


Fig. 2. First attack and repeat attack of the M. flight.

Finally, Captain M. deals with the actions of friendly troops. He states that artillery fire is to be underflown[2] and explains how they will use a certain sector, which had been shelled by artillery only minutes before, to make their breakthrough. Having clarified the mission for himself comprehensively he presents his commander with the following decision:

a. Takeoff time, 0900 hours.

b. Rendezvous with transport helicopter squadron, 0910 hours at location X.

c. We will fly along the line X-Y-W-overflight-main line of resistance-drop zone.

d. The flight will occur at medium speed at extremely low altitudes. The transport helicopter squadron overflies the main line of resistance 3 minutes later. They begin deploying their paratroops 1 minute after our repeat attack.

e. Order of battle of the flight: column of twos in line rights.

f. Combat heading will be 320°, action time 0930 hours.

g. "Enemy" antiaircraft missile complexes will be overcome primarily by flying at extremely low altitudes at flight speeds which will mark the helicopter as a solid target and by flying through sharply broken terrain as well as through the constant maneuvering of the combat helicopters.

h. Self-propelled antiaircraft guns, short-range antiaircraft missiles and infantry weapons will be overcome through a sharply changed flight profile at maximum speeds and at extremely low altitudes.

i. To engage the target we will use unguided missiles immediately prior to overflight (2,000 to 4,000 meters).

j. After overflying the main line of resistance the flight will attack the crop zone. Combat heading 320° (time 0930 hours). Subsequently, the first pair alters course to 150° and executes its repeat attack on a heading of 340°. The second pair breaks off to the left to a heading of 125°. It flies the repeat attack on a heading of 305° (Figure 2). Thereafter, the pairs turn toward the south or north edge of the approach corridor. They fly off in the direction of friendly troops.

k. Anticipated landing time, 1005 hours.

The squadron commander confirms the flight commander's decision. Now, all crews are precisely briefed on their missions. The flight takes off precisely on time. Another article will deal with the way in which they fulfilled their mission.

FOOTNOTES

1. The through-flight corridors are communicated to the flight commander by his superiors at the time of mission assignment. They have been coordinated with the troop components of the ground forces (artillery, division air defense, armor, motorized infantry) with respect to position and time so that a secure through-flight is possible.

2. In order to underfly the artillery fire, the flight commander must know the timing of the artillery action precisely. He must know the point of origin and the point of impact (range) of the firing. In an underflying maneuver the predetermined course must be precisely maintained since flight safety would be endangered otherwise.

BIBLIOGRAPHY

1. "DV 325/0/001, Combat Regulations of the Ground Forces, Battalion and Company," 1984.

2. "DV 325/0/002, Combat Regulations for Ground Forces, Platoon and Squad (Armor)," 1984.

3. "A 043/1/004, Armaments and Equipment of NATO and French Ground Forces, Vol 1," 1981.

BENEFITS OF TRAINING WITH SOVIETS CITED

East Berlin AUSBILDER in German Feb 85 pp 2-5

[Interview with 1st Lt. Peter Algenstedt (date and place of interview not indicated): "Shoulder to Shoulder Unvincible"]

[Text] Two anniversaries--the 40th anniversary of the liberation of the German people from fascism and the 30th anniversary of the establishment of the Warsaw Pact--gave the editors the occasion to conduct conversations with successful training officers. Their thoughts and experiences attest to the fact that it is especially the efforts of the heroic Soviet people and of its glorious Soviet Army that are unforgotten. Our training officers know about the strength of the Soviet Union and the entire community of the Warsaw alliance. They are convinced that, given today's power ratio, any policy of military oppression and aggression is doomed to failure. And they proceed from the standpoint that the battle for freedom is to be won repeatedly.

In the socialist competition under the title "Day of the Soldier--The 11th Party Congress. Prepared To Fight for Freedom and Socialism at All Times!" they will fulfill any combat assignments given them at their place of activity and that they will prove themselves to be comrades-in-arms in any situation.

[Question] AUSBILDER asked 1st Lt Peter Algenstedt, the company commander of a chemical defense unit, "you are barely 27 years of age. What recollections and thoughts do you connect with the day the German people were liberated from the fascist yoke?"

[Answer] I recall one experience from my school days. At the time, I might have been in the third grade. Students, teachers and guests had gathered in the courtyard of our polytechnic higher primary school in response to a call to muster. I particularly noted the presence of Soviet officers. In a subsequent conversation our class leader spoke emphatically about the significance of the 8th of May 1945 and we viewed photographs showing soldiers of the Red Army in combat. In later history instruction I learned details as well as connections regarding the beginning and course of World War II. Soviet troops, who bore the brunt of the war, self-sacrificially conducted more than 50 major strategic operations involving front groups, some 250 front and army operations, as well as thousands of engagements and battles until they achieved victory over Hitler's fascism. The invincible power of the Soviet state had shown itself.

I still remember well the time I participated, as a member of an officer recruiting collective, in a solemn celebration which took place at a facility of the Group of Soviet Forces in Germany. In the ceremonial address a Soviet colonel recalled the 20 million Soviet citizens who gave their lives in the bitter battle for liberation of the people. My image of the heroic spirit and the will to win of the Soviet people, their willingness to make sacrifices and to render aid was also expanded through many a conversation with my father.

Today I am aware of the fact that: not until the victory over Hitler's fascism were conditions created on the soil of Germany which made it possible for the working class to take over power. Our grandfathers and fathers, supported by their Soviet comrades, utilized this opportunity and successfully established socialism. I and my brothers and sisters were able, like all people of my age, to grow up in security and to develop according to my own wishes.

This was possible because socialism was always securely protected. Everyone in my collective knows, we have spoken about it, that, thanks to the strength of the Soviet Union and the entire community of the Warsaw alliance, the people of Europe were able to experience the longest period of peace. Consequently, in view of the thus far most dangerous situation for peace since 1945, which is caused by the policy of confrontation and armament carried out by the most aggressive circles in the United States and in NATO, we shall redouble our efforts in combat training. Our comrades give expression to their political-ideological attitudes in their daily struggle to achieve the title "Best Unit." This is simultaneously our contribution to a level of performance at which we fulfill our combat mission in any situation alongside our Soviet class brothers and comrades-in-arms and the other fraternal armies. The imperialists must not figure on having any chance.

[Question] Which occasion have you been able to use to prove the unanimity and the capability of your collective to undertake joint actions with their Soviet comrades-in-arms?

[Answer] It was during a joint training exercise in the field. We were tasked with developing a special treatment area jointly with a Soviet Army chemical defense unit. For the first time, the Soviet comrades were to be placed under my command. The ARS 14 crews had been mustered in front of their equipment and were looking at me expectantly. I had prepared myself well for the training exercise and had refreshed my knowledge of Russian. I was nevertheless excited.

I briefed our Soviet comrades-in-arms on the situation, chose the place for special treatment, issued the order to deploy the vehicles and set the time at which the facility was to be ready to function. I did all this as clearly as possible, even in Russian, so that everyone understood my directions.

As members of the chemical service know the ARS 14 can be deployed in accordance with a number of different variants (depending on the mission). In my training practice I found it useful to use the key words "preliminary treatment" before issuing the order: "Deploy the ARS 14." My subordinates immediately deduced the required deployment variant from this without requiring any further explanation.

I was not able to make this same supposition with respect to the Soviet comrades since I was not familiar with their method of training. Thus, I explained in Russian that their vehicles were to be deployed for pretreatment with three steel tubes.

Cooperation within the collective was frictionless. The specialized dexterity appeared equal, one could have expected nothing else. However, the Soviet crews set the pace. Our comrades did not find it easy to keep up. But the stopwatch showed: all crews established the operating readiness of the special vehicles within the standard time so that decontamination of engineer equipment could be begun immediately. For me, the view was confirmed that although we speak different languages we are trained according to the same principle and we are ready to fulfill the tasks expected of us jointly.

Another example: training in mixed groups was organized for nuclear and chemical reconnaissance personnel. Both in our case as well as with respect to the Soviet comrades-in-arms, the group leader and the military driver/-nuclear-chemical reconnaissance person, remained as part of the crew. The second nuclear-chemical reconnaissance person was exchanged. I was confident because in our combat training--frequently in contests among ourselves--we had trained repeatedly with respect to activities involved in NBC reconnaissance, including camouflage. Nevertheless, working shoulder to shoulder in a crew represented a new challenge. NBC scout Cpl Thomas Juette told me: "I had some reservations at first of being able to make it in a new collective." As soon as he had reported to the Soviet group leader he found out how unjustified his reservations had been. Everyone was very friendly toward him. The group leader, a warrant officer, spoke a little German and they had immediate contact. It was as though he had been a member of the Soviet crew for longer.

Our comrade looked around in the NBC reconnaissance vehicle of our friends determining that there were only minor differences in equipment. While we, for example, measure nuclear radiation with the RWA 72 the Soviet comrades use the DP-5. They are based on the same principle but are executed differently.

Our "delegates" followed Russian orders in the NBC reconnaissance vehicle crews of our comrades-in-arms and our "guests" followed German orders.

Naturally, in preparing the WPChR, PPChR and GSA 12 instruments as well as the DP-5 and RWA 72 nuclear radiation measuring instruments everyone was interested how his neighbor proceeded. Everyone wanted to know which maneuvers or shortcuts would result in underbidding the standard time set for rendering the vehicle ready for operations.

Our NBC scouts were impressed to see how rapidly the Soviet crews prepared the marker flag mortar. The vehicle driver, for example, unscrewed all the nuts of the launch device from the mortar. The group leader inserted the propellant charge. Immediately thereafter the NBC scout who had removed the nuts was able to reinstall them. Our NBC scouts also saw how, through good teamwork, the crew was able to rapidly deploy the camouflage net over the top of the NBC reconnaissance vehicle.

It is true that the demands made upon an NBC scout are equally high, irrespective of whether he is in a Soviet crew or in one of ours. Nevertheless, every one of us felt that the Soviet comrades-in-arms were acting as though they were under direct enemy influence, as though they were in combat. This was manifested particularly in their tactically more clever conduct. They made use of every bit of natural cover of the terrain to protect themselves.

[Question] Which experiences collected by the comrades from "the "Regiment-Next-Door" have helped you to increase training results?

[Answer] During joint combat training, but also in subsequent exchanges of experiences regarding how to accomplish training, I saw for myself: the Soviet training officers do everything to realize the educational and training goals of every training hour. They begin to do so in the preparations for training. For example, they consider what type of conduct they will inculcate in their subordinates with respect to the impending training exercise and in what manner this is to be accomplished. With what arguments are they to be mobilized for higher demands and how is this to be connected with the training topic? How can their physical stability be increased and which types of dexterities are to be reinforced in handling equipment?

It is not surprising then that given this kind of approach the readiness to perform and the discipline action in combat training is continuously growing. I was also able to obtain pointers on how situations can be created which closely approach combat conditions. Defense against "attacks by saboteurs," the loss of crew members, require the collective to meet its tasks with fewer forces and in the shortest possible time. This, in turn, requires that we spend more time on the unanimity of the collective in order to be able to master the requirements for a disciplined, coordinated and tactically clever type of action on the battlefield.

The joint training also led us to qualify group leaders in giving orders during the deployment of special equipment and to exercise stronger control with respect to all actions which are based on the demands of combat.

In short, these were examples of educational and training activity or those involving the organization of training. Examples which were of particular benefit to us in the socialist competition entitled "Day of the Soldier--The 11th Party Congress. Prepared To Fight for Freedom and Socialist at All Times!" and in the initiatives involved in the "Ernst Thaelmann Challenge to the FDJ" to underbid the standard times. They all contribute to an increase in performance with which we will make it at any time alongside our comrades-in-arms.

(The conversation was directed by journalist Gerlinde Schwuchow.)

INFORMATION PROVIDED ON MILITARY MAPS

East Berlin AUSBILDER in German Feb 85 pp C24-C28

[Article by Comdr Fritz Klementz: "Geographic Coordinates From Topographic Maps"]

[Text] "War experiences of the Soviet Navy teach us that the fleet cannot be successful without the closest cooperation with ground troops"[1]. In the theater of naval warfare or in coastal defense it is necessary for ships and boats of the People's Navy to cooperate with ground forces in their actions because service crews can only then employ the various weapons systems effectively. Chiefs of naval forces and commanders of combat vessels must, for example, have precise knowledge regarding the position and targets of friendly and enemy forces as a basis for their decisions and the control of combat actions.

In combat, topographic and marine maps are an essential aid in determining locations and objects despite modern technical instruments and facilities. Every GA-1 [combat sector 1] commander or chief petty officer knows, for example, that certain coordinates can be determined, among others, with the aid of nautical maps so as to reliably determine the position of the ship. However, he must also know how these coordinates are used in navigation and how they are to be handled.

What do we understand under the concept of "coordinates"?

"Coordinates are magnitudes (angles or courses) which are expressed in numerical terms and which define the location of points on a flat area or in space clearly in a predetermined reference system".[2]

We proceed from the standpoint that vessels of the People's Navy are only equipped with nautical charts and troops of the ground forces with topographic maps. In joint actions commanders must use coordinates whose values can be used both in nautical charts as well as in topographical maps. These are the geographic coordinates.

The Geographic Net in the Nautical and Topographic Map

Geographic coordinates are divided into astronomic and geodetic coordinates. Since it is not possible to depict astronomic coordinates--they refer to the geoid which cannot be presented--the mathematically derived coordinates, which are directly related to a reference ellipsoid, are referred to as geodetic coordinates. We will designate them as geographic coordinates hereafter. They determine the location of a point on the surface of the earth through the geographic latitude ϕ and the geographic longitude λ, expressed in degrees (°), minutes (') and seconds ("), see Figure 1.

Marine charts and topographic maps contain different variations of the geographic net used in determining coordinates. This depends on the purpose of the map. How do both of these maps differ with reference to the geographic net?

The marine chart is based on the true angles of the mercator projection. This requires that the distance of the parallels from the equator must be enlarged in the same ratio as the parallel rings are expanded. The distances between parallels are constantly increased in a certain ratio northward and southward of the equator. As a result of this, the rhumb line is shown as a straight line.

The topographic map is based more approximately on the cylindrical true angle transverse gauss projection. The map depicts meridian lines which are 6° in width (see Figure 2). The middle meridian is shown free of distortion as a straight line with the limiting meridians shown as curved lines (see Figure 3).

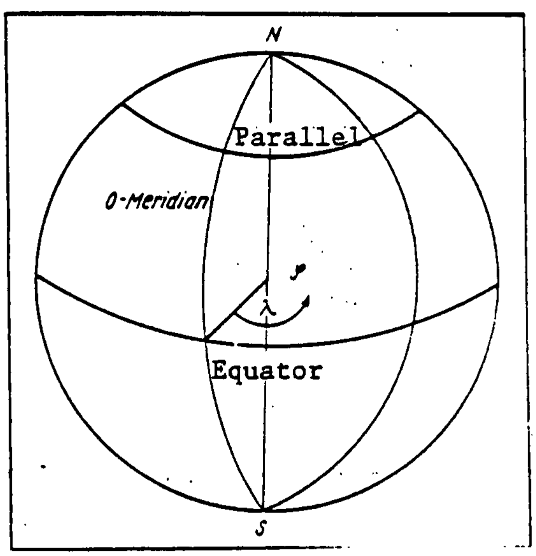


Fig. 1.

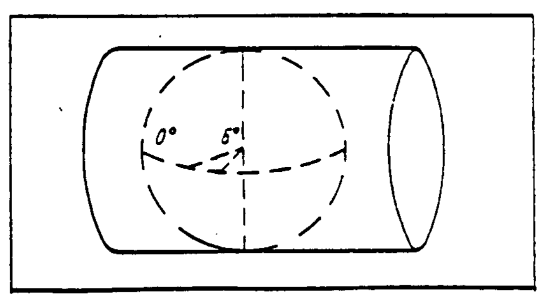


Fig. 2.

The map comes into being at a scale of 1:1 million on the basis of a conical projection. As a result, the meridian strips have been replaced by spherical trapezes. The individual trapezes which appear on separate pages of a map represent the limiting meridians as straight lines and the parallels as arcs with different radii (see Figure 4).

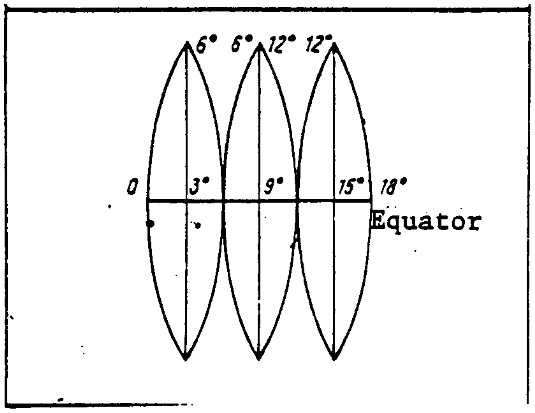


Fig. 3.

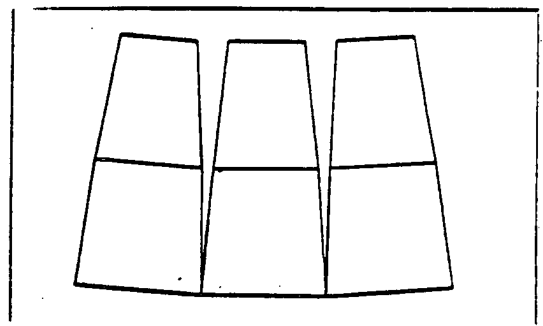


Fig. 4.

Expressed more simply, the geographic net of a topographic map is a trapeze. In contrast to the nautical chart, this map shows the distances between geographic latitudes to be equal while the geographic longitudes north of the equator become shorter from south to north. The coordinates consist of the geographic latitude B and the geographical longitude L. As a result of the different ways of depiction, a slight difference occurs between ϕ-type latitudes and B-type latitudes which can be overlooked in practical use.

Geographic Coordinate Net of Topographic Maps

The geographic net is shown on topographic maps at a scale of 1:10,000 through 1:200,000 as a minute grid in the map margin (see Figure 6), whereas topographic maps at a scale of 1:500,000 and 1:1 million contain the geographic coordinate net. The value of the minute grid on 1:10,000 through 1:100,000 scale maps equals 10"; on 1:200,000 maps it equals 1' and on 1:500,000 through 1:1 million maps it equals 5'. In the corners of the map the appropriate southerly and northerly limiting parallels as well as the westerly and easterly limiting meridians of the geographic coordinates are listed (see Figure 5) [not included].

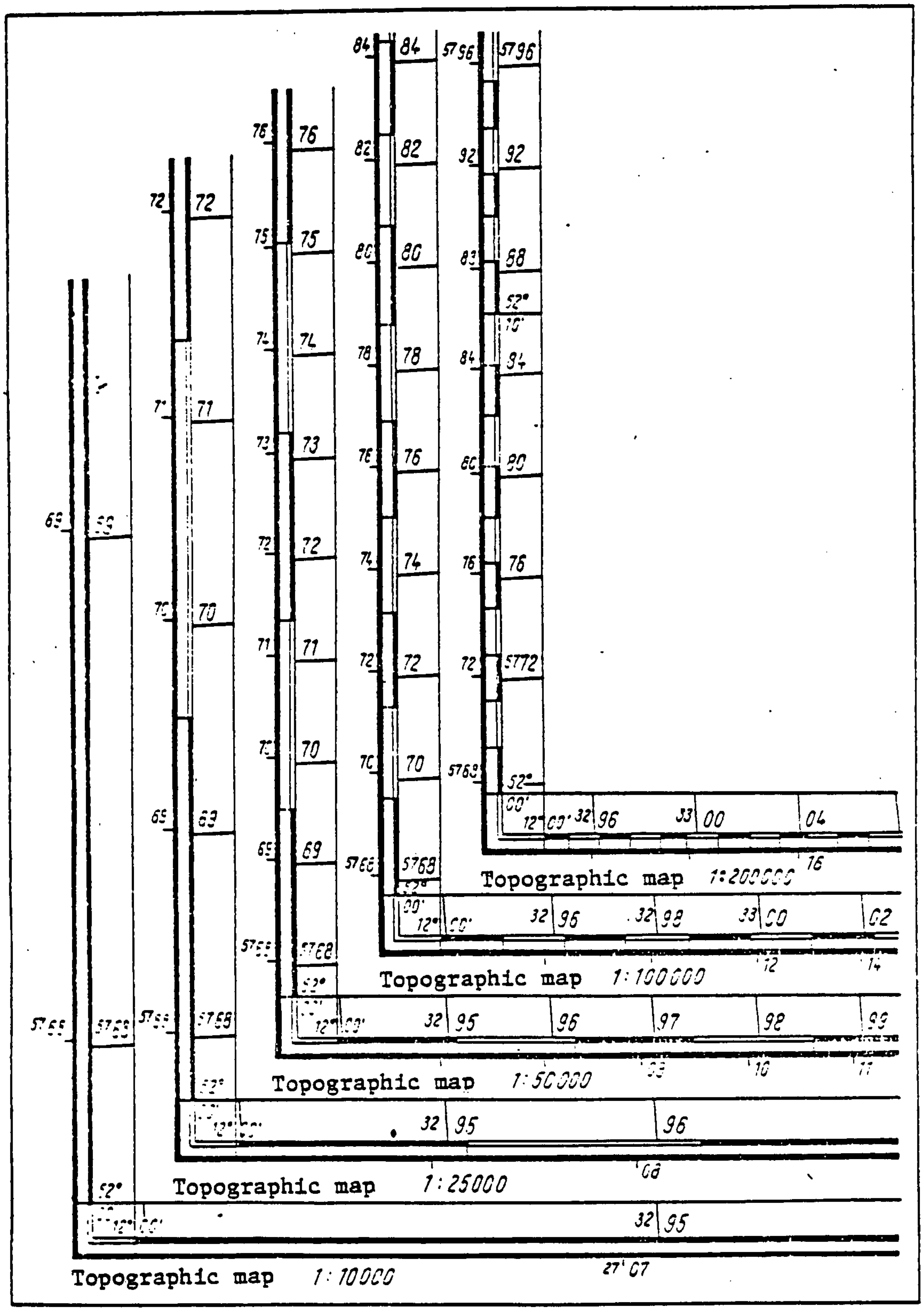


Fig. 6. Map margin with minute grid of topographic maps from 1:10,000 to 1:200,000 scale.

Geographic Coordinates From Topographic Maps

To make it possible to determine geographic coordinates as auxiliary grid is placed over the map (by sector). To the south and north, as well as to the west and east of the sought-after point, the opposed identical markings of seconds or minutes which appear in the margin are to be connected. The net must be drawn in order to be able to work error-free with the compass and to be able to identify the minutes more easily. The latitude differences between the southern and northern limiting parallels can also be exactly interpreted. The compass is to be used to determine the differences between the drawn latitudes and longitudes with respect to the sought-after point and are to be transposed to the minute grid. Starting with a southern or northern latitude of the limiting parallel and the western or eastern longitude of the limiting meridian of the map, the coordinate difference of the auxiliary net is then determined. Thereafter, the minutes and seconds shown on the minute grid pertaining to the transferred point are to be counted out and interpolated (see Figure 7, Point 1 [not shown]).

At a scale of 1:500,000 and 1:1 million it is not necessary to draw a grid since these maps already contain a geographic coordinate grid. The coordinates thus determined can be used in any marine chart.

Where geographic coordinates are to be entered on maps at a scale of 1:10,000 through 1:200,000 the latitudes on the western or eastern limiting meridian and the longitudes on the southern and northern limiting parallel must be plotted and connected together. Where they cross there lies the point to be located (see Figure 7, Point 2 [not shown]).

On maps of a scale of 1:500,000 to 1:1 million, which are provided with a geographic grid, the longitude (in the interest of precise interpolation) is first to be plotted on the southern and northern limiting parallel and to be interconnected. On this drawn line, the latitude difference is to be entered with the protractor as taken from the nearest parallel. This then identifies the specific point on the map. The coordinates which have been taken from maps or plotted must be constantly checked to eliminate error, since every wrong use or every irresponsible act involving coordinates can, under circumstances, have serious consequences.

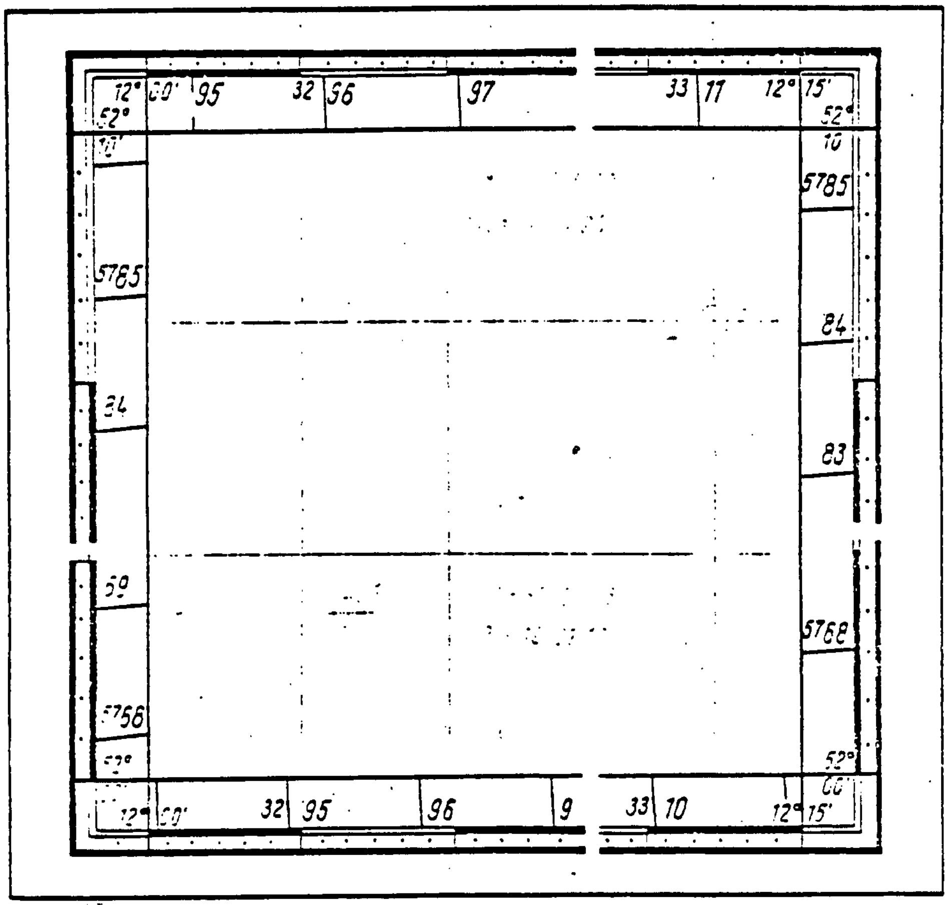


Fig. 7. Determination and plotting of geographic coordinates.

FOOTNOTES

1. Y.A. Pantaleyev, "Mein Leben fuer die Flotte" [My Life for the Fleet], Moscow, 1982, p 330.

2. Collective of authors, "Militaertopographie" [Military Topography], Berlin, 1982, p 32.

OBJECTIVES OF NAVAL NAVIGATION TRAINING

East Berlin AUSBILDER in German Feb 85 pp C14-C17

[Article by Lt. Comdr Peter Richter: "Complex Navigational Sailing Assignments Using the Navigational Trainer"]

[Text] At the fleet school we training instructors use the navigation trainer in order to impart usable capabilities and dexterities involved in secure navigation of the course of a combat vessel or boat at sea and during combat deployment to future helmsmen petty officers. In other words, we have the capability not only to train them effectively but also to extensively simulate realistic conditions because the course and speed of a vessel are indicated in simulated form, as is the log reading (which is time- and speed-dependent). With the aid of a command transmitter, we familiarize our petty officer students early on with the exact command and reporting language and get them accustomed to using unified military commands.

The most important method involved in the special training using a navigation trainer has proven to be complex traverse sailing practice. The student petty officer can become lastingly familiar with the various navigation procedures, with the documents, with the course triangle and the protractor. Briefly stated: he not only learns his trade but also to become aware of his responsibilities for determining a safe and reliable course for the vessel.

Before it gets to that, the trainees must practice the most varied navigation exercises. And it is also understandable that this cannot occur without the disaster signals, combat signals and daily signals which they learn through the use of a tape recorder. Signals which they "master in their sleep" and according to which they must act in the navigation trainer. Using modern training equipment, the helmsmen petty officers learn the following:

a. To be clean and neat with respect to basic tasks marked on nautical charts and in the keeping of the ship's log and the navigation log;

b. To reliably determine the ship's position by terrestrial, radio and radar baselines;

c. Hyperbolic navigation and the use of drift and current in traverse sailing exercises;

d. To master fundamental provisions of the rules of the road at sea;

e. To determine the maneuvering elements of a vessel;

f. The necessary calculations in order to avoid [approaching an obstacle?] at short range;

g. The maritime buoy system;

h. How to determine the movement elements of radar targets;

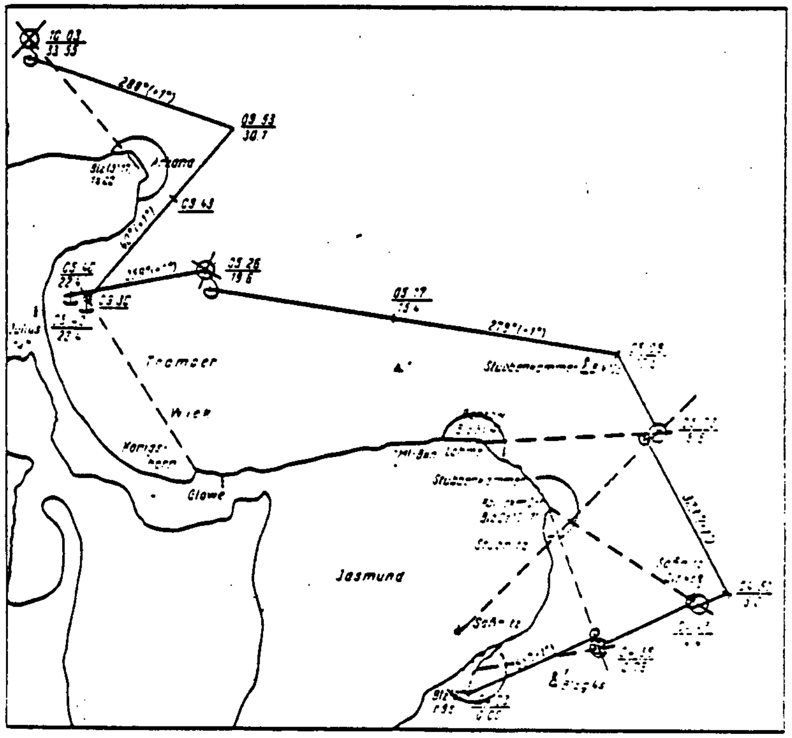
i. How to solve position, collection, search and reconnaissance missions;

j. Combat tacking and taking care of the hydrometeorological observation services on board.

At the beginning of each training exercise the training officer familiarizes the petty officer students with the educational and training goals and motivates them toward a high preparedness to learn and to perform. In the case of complex traverse sailing problems, the instructor will also brief them on the special aspects of the area of the sea to be navigated, such as shoals, danger points, prominent bearing objects to be used in determining the ship's position, depth lines, buoyage, illumination beacons, navigation channels and local water conditions. This way, he does not only create prerequisites for an error-free course of the training using the navigation trainer but leads the student toward the knowledge that a suitable route is to be selected and carefully worked out even before a ship departs its mooring. This requires thorough knowledge of the appropriate area of the sea and an intensive study of navigational conditions, as well as mastery of various navigation procedures.

In the training department we have an Aspectomat machine, a Meoclub 16, two open-reel tape recorders and one Polylux daylight projector.and we can use it to visually impart the teaching material. In addition, the clocks located at various locations permit us to work by astronomic time or tactical time. A quick-motion machine makes it possible to create realistic situations in a ratio of 1:2. Added to this is the fact that the petty officer student learns to keep the ship's log and the navigation log at the same time as the nautical chart.[1] He must also act independently when he is encoding hydrometeorological observations or where running lights, traffic separation regions, as well as audio and light signals, are involved.

A part of a navigation exercise is intended to illustrate the use of the navigation trainer in the special training of future helmsmen petty officers. Of the basis of prescribed values, I would like to demonstrate the tasks which the individual student must solve regarding navigation chart No 62 (see Figure).



Depiction of a ship's course in a modified segment of navigational chart 162 "Waters Between Ruegen and Moen" (scale: 1:100,000).

Standard values: KrA = +1°; FF—compensation in effect; lb = +2'; $\Delta P_f = \pm 0°$; $\Delta e_f = \pm 0$ kbl.

Within the navigation trainer the bell signal for "combat alarm" or "action stations" is sounded. Similar to what would happen at the combat station on board, the petty officer students prepare their training sites. Toward this end they use the navigation equipment installed at every workplace, nautical documentation and working materials. After they have reported their combat-preparedness to the instructor, the navigation exercise begins. Until this point the petty officer students were mostly concerned with proving their abilities and dexterities with respect to traverse sailing problems involving the nautical chart.

During the subsequent combat tacking exercise the following is expected of them: to determine the motion elements of radar targets, to solve information collection, position, as well as search and reconnaissance missions. The training officer evaluates the performance with the aid of a result memory storage facility and a digital indicator, as well as a printer at the training location--a significant advantage for the trainee which stimulates him and promotes his performance readiness. Because, after having solved certain partial tasks, the training officer can already give him his results just a little later.

In summation, I estimate that a future helmsman petty officer can prepare himself for his on-board functions using the navigation trainer by acquiring certain fundamental dexterities. Following a certain familiarization period and stabilization of his dexterities, he is in the position of being able to do his share toward the navigational security of the course and combat deployment of a combat ship or boat.

FOOTNOTES

1. Of importance is the AO No 12/74 of the deputy minister and chief of the People's Navy on the introduction of new regulations for keeping the ship's log dated 3 April 1974 (NMV--special edition) and also the regulation "Keeping the Nautical Log and the Traverse Sailing on the Nautical Chart."

REPORT ON POLITICAL MAIN ADMINISTRATION CONFERENCE

East Berlin PARTEIARBEITER in German Jan 85 pp 2-12

[Report on the Scientific-Methodical Conference of the Political Main Administration of the NVA, held on 8/9 Nov 84 at the 'Wilhelm Pieck' Military-Political College, under the direction of Col. Gen Heinz Kessler: "For Greater Effectiveness of Communist Education, Especially Social Sciences Training, at the Military Institutions of Higher Education"]

[Text] Our conference is held at a time when everywhere in our army an assessment is being made of what has been achieved and we, like our entire people, are entering the last segment of struggle to fulfill the Tenth SED Congress resolutions. At the commander's conference to assess the 1983/1984 training year, the minister of national defense, Army General Heinz Hoffmann, was able to report to Erich Honecker, General Secretary of the SED Central Committee, chairman of the State Council and of the National Defense Council, that the NVA, the GDR Border Troops and civil defense have "fulfilled the class mission assigned by the Tenth SED Congress with the thus far biggest growth of combat effectiveness and combat and operational readiness" in the 35th year of the GDR in unswerving class brotherhood and comradeship-in-arms with the Soviet army and the other fraternal armies. The members of the military academy facilities, led by the communists, made their indispensable contribution to this proud balance sheet.

What are the significant results from which we can start? Especially valued is the fact that the teaching facilities have proved successful as places of communist education and scientific scholarliness under the conditions of the growing demands on our armed forces, as genuine developers of cadres of class conscious and military competent officers. They act from a sense of responsibility that their accomplishments will have far-reaching effects for the combat effectiveness and readiness of the coming years and decades. This is a result of diligent and self-sacrificing work of the commanders, political organs and party collectives, of the command, teaching and security forces, of the FDJ and the other mass organizations.

In reviewing what has been achieved, it is evident that we have good conditions in the future, too, for putting the science and higher-education policy into effect for maximum possible benefit to the military strengthening of the GDR. Through their striving for a large increase in performance, our schools, just as commands and forces are becoming part of the great movement of the working class and all working people in preparation for the 11th SED Congress. In this connection, the policy orders of the Minister for National Defense for the training year provide us with the decisive yardstick for all our political and military efforts.

Class Conscious Socialist Military Cadres--Main Concern of Communist Education

When among the multitude of problems to be solved we are emphatically putting communist education on the agenda, then this is done with the awareness that a task of strategic rank is involved. What is our primary objective?

It is important to educate and train officers of such a caliber that they are able to successfully meet the growing demands on combat effectiveness and readiness. The heart of the matter is to shape officer personalities on the foundation of Marxism-Leninism who as communists and military specialists are always loyal to the party and actively implement its policy, who act side by side with the Soviet army and the other fraternal armies as executors of will of the working class aware of their responsibility for the safeguarding of peace and socialism. What is involved are officer personalities who exert all their strength to master the demands of modern military affairs with knowledge of the subject matter and consistency. We are educating cadres who possess high combat morale and great military mastery, who prove their ability in field service, who resolutely pull their weight in armed combat even under maximum physical and mental stresses.

Political partisanship and revolutionary fighter spirit of our officers are firmly established in socialist awareness of history. Only a person who has a deep and vidid feeling for the path of the GDR, our socialist fatherland, rich in struggles, sacrifices, troubles and victories, for the history of the Marxist-Leninist party and of our entire people, will always honorably fulfill the oath of allegiance and the officer's oath.

Development of the historical awareness is an inseparable part of communist education. The knowledge about the past and the future of our path is an essential source of strength and an indispensable prerequisite for class-conscious action, for optimism and confidence in victory.

We must always keep in mind in the historical-ideological work that the officer candidates and also the majority of the officer students no longer know from their own experience the class struggles even of the recent past but must comprehend them by the study of history. Comprehensive knowledge on the historical development of the GDR, deep feelings of close ties with the working class and its struggle contribute to gaining a deeper understanding of the process of the revolutionary changes in socialist society. This also keeps us from simplifying the complexity and the hardness of our struggle and helps the students and candidates to recognize the values and advantages of socialism as historical achievements in their total significance.

In unity with own experiences, concrete knowledge of history and especially also that of our GDR thus becomes an important motivation of social activity, the stimulation for the selfless action in the military protection of socialism and peace.

Communist education and self-education thus is above all directed towards developing convictions, attitudes and modes of behavior, moral and character qualities which are determined by the scientific ideology of the working class. At the same time, and that must be stated just as unequivocally, communist education includes the development of seemingly everyday characteristics of the superior, such as modesty, punctuality, reliability, alertness, sense of order and also cultured behavior. Communist education and self-education in the military field attains its political importance particularly because it forms the highly disciplined cadre which in all--even in critical--situations exhibits exemplary soldierly general conduct, carries out all orders unconditionally and full of initiative. Therefore all our efforts are directed toward developing and strengthening step by step the merits of the personality of the socialist officer indispensable for active action in combat, based on an unshakable ideological foundation.

The result of the communist education finds concentrated expression in the attitude towards the military profession. Shaping of class-based professional motivation has always been among the priority concerns of the entire work in the schools. The starting position for that, among the officer candidates who start their studies, is characterized in recent years by the fact that political reasons are dominant for their professional decision. As the latest results impressively confirm, we are making constantly better progress in the stabilization of the professional motivation also in the course of the study.

How diverse and rich the personality that is to be developed may be--its ideological fighting position is in the center of interest. Especially under the conditions of the heightened conflict with imperialism, especially our cadres are confronted every single day by the requirement to correctly answer from a class point of view the decisive questions about the meaning of being a soldier "For whom? With whom? Against whom?". This requires first of all deep understanding for the revolutionary character of our social development, unshakable conviction concerning the justice and triumph of our cause.

Today socialism constitutes an invincible power. The community of the fraternal countries is in the position, as comrade Erich Honecker said, "to solve two tasks of strategic importance simultaneously...to develop the advantages of socialism for the benefit of man and to guarantee man's security." Strong socialist armed forces which reliably protect peace and socialism are needed for this purpose. The socialist officer supports from fullest conviction the peace strategy of socialism, which answers the most important questions now stirring mankind. Therefore he makes his contribution to preserving the military-strategic balance, one of the most important achievements of real socialism, as an essential prerequisite for safeguarding peace. He does not give any chance to the imperialist striving for military superiority. He acts according to the finding that the United States and NATO bear sole responsibility for the most dangerous situation for peace since World War II. It fits in with the rottenness and corruption of state monopoly capitalism in the FRG that its exponents, the Flicks, Barzels, Kohls and cohorts unscrupulously support and help carry the course of the "crusade against communism." In the wake of the deployment of new U.S. intermediate range nuclear weapons in Western Europe, the danger that a war may start from German soil, from the FRG, has arisen for the first time since World War II. The Soviet Union and its allies cannot stand idly by and watch this happening. The unambiguous words of comrade Konstantin Chernenko fill us with strength and optimism: "There will be no repetition of June 1941. Every aggressor will be met with immediate retaliation. Everybody should know that--our friends as well as our enemies."

A basic concern of the education of our cadres is and remains deepening their conviction of the world historical role of the Soviet Union as the principal bastion of socialism and communism, of the unshakable class and military alliance of the socialist armies. The strength of real socialism is based primarily on the strength of the USSR. Since the Red October, the face of our planet has been irrevocably changed. History proves: Nothing in the world moves in the direction of a good purpose without the Soviet Union, its power, its example, without its support and its influence. No country on earth has done as much for peace and social progress in the past course of our epoch as the USSR. Owing to the tremendous efforts, especially of the Soviet people, it was possible to eliminate the military superiority of imperialism for all times. It is the merit especially of the Soviet Union to have broken through the tragic cycle of the exploiter society in which peace was always nothing more than a respite between wars.

Without the existence and power of the Soviet Union, without its heroic victory in the Great Fatherland War over the fascist barbarians, national and social liberation would still be far off for many states and peoples of the world, there would be no socialist German state now. The more than three and one half decade GDR history is convincing proof that the successful development of our country is based above all on the unshakable alliance of friendship with the USSR and the other countries of the socialist community. The Warsaw Pact alliance is our lifeline which we do not permit anyone to touch.

It is the good fortune of mankind that the Soviet Union exists. To be allied with the Soviet Union remains our first commandment of internationalist thought and action. Along these lines, the 40th anniversary of the victory over Hitler fascism and the liberation of the German people from fascism and the 30th anniversary of the founding of the Warsaw Pact constitutes for us a noble duty everyday to forge more closely the class brotherhood and brotherhood in arms with the Soviet Union and its glorious armed forces, especially with GSFG, with all states and armies of our coalition. That was also a dominant idea of the Fourth International Conference of Leading Ideological Cadres of the Armes of the States Participating in the Warsaw Pact, the results of which will also be a valuable help in communist education. A socialist officer is distinguished by the fact that he conscientously fulfills every combat mission and always proves himself as a reliable comrade in arms.

For Higher Effectiveness of Communist Education in the Total Process of Political and Military Life

If we ask how, in what way such military cadres that can do justice at all times to the growing demands can be developed, the answer can certainly not be given in one sentence. Our experiences always underscore anew the entire magnitude and the extent of this task. For education and self-education of clas-conscious officers are never really a result of one or the other individual measure. Rather they can only be successfully achieved in the total process of political and military life.

M.I. Kalinin already pointed out that "education of people, especially of soldiers,..." is "a complicated...matter." "In this work one must not completely depend on any unchangeable organizational forms.... Not all questions of education can be forced into a ready-made form alone, however good it may be."

Communist education achieves the desired results to the extent that it is consciously guided and shaped by us as unity of ideological, political, military, moral, esthetic, legal and physical education. This list does not imply that all are of equal rank in importance. Rather it is important, as the minister for national defense demands, "to utilize more strongly the possibilities for ideological education in their entire breadth. This applies to the development of the educational potentials of all training subjects and the entire life in the school.

Since all military duties and tasks embody first of all an ideological claim, ideological work, imparting and acquisition of Marxism-Leninism as a compass for daily action, undisputedly possesses greatest importance.

Just as ideological work constitutes the core of party work, it also forms the core of communist education; this, as we know, not as a matter of individual specialists but as the concern of the entire party, of all who bear responsibility at the educational institutions. In this circle it undoubtedly does not require any further substantiation that thus communist education is complex in nature in the most demanding sense of the word. This must also consciously be taken into account in the leadership activity by the chiefs, commanders and directors as well as by their deputies, by the political departments, party and FDJ organizations. According to the present status of the findings, especially of our Soviet comrades, as well as in analysis and generalization of our own experiences, the most important requirements can be summarized as follows:

A complex approach to communist education signifies handling all its components as a uniform process in which the multiplicity of the goals and contents are so united that in final analysis the efforts are directed towards forming the developed socialist officer personality as a whole.

A complex approach signifies coordinating and adjusting to the necessary extent of the action of the forces participating in the education in the interest of the overall goal.

A complex approach signifies linking the ideological work with the daily proving themselves of the officer candidates and officer students in military service and their active participation of the political struggle of the party and thus taking continuously better advantage of the possibilities of self-education.

A complex approach signifies suitably choosing and applying the forms, means and methods in agreement with the goals and taking into account the concrete educational situation.

A complex approach signifies continuously pursuing the pedagogical process, analyzing it concretely and tracking down, generalizing and applying the positive.

We underscore the idea that the how of leadership and shaping of the communist education deserves maximum attention. However different the ways and concrete experiences at the individual schools may be, in each case extensive conceptional work is required to determine in each case the most suitable methods of leadership.

Training--the Most Important Field of Communist Education

All of us are familiar with the idea that for high effectiveness of communist education, as it cannot be any other way at an institute of higher learning, above all training assumes decisive importance. Fundamentally what is involved is to achieve more and more completely the demands for university-level training. Especialy since the changeover to the 4-year training with degree we have made a good progress in this field. But much remains to be done. This concerns a high quality of teaching events, good instruction, in which such tested principles as partisanship and scientific character, unity of education and training, of theory and practice, of firm leadership are implemented by the teacher as well as creative activity and high personal responsibility of the students. This requires at the same time following specific ways and applying methods which directly prepare our cadres for the most difficult form of military practice, armed combat. To make better headway in academic training so understood, it is important to strengthen the party influence especially in the following directions:

First of all, it remains urgent to develop and utilize the educational possibilities of the content and the shaping of the training more comprehensively. And this applies equally to all fields, to social-science, military, military-technical and foreign-language training as well as to mathematical-natural science and engineering basic training. Of course education requires imparting and acquisition of comprehensive and exact knowledge--also knowledge of facts. To understand connections, laws and their effects in social and military practice, that does require firm knowledge. Starting from this fact, independent thinking must be characteristic of an institutuion of higher learning. Such independent thinking is also served by interesting shaping of instruction challenging with problems, always striving not to present ready-made knowledge without comment but to follow the path of understanding jointly with the student, to challenge his ideas and to enable him to solve tasks independently.

Second, educationally effective training demands constant striving for a high relatedness to the troops and to war. From what has already been said, thus far, it became evident that the objective requirement of a possible war and the consequences for the combat readiness of the field forces and the fleet to be derived from this situation must be the starting point of all our actions. In this connection, the specific conern to effectively qualify the officers for their leadership tasks, for the work with the people is in the center of our attention. The more the candidates and the students feel that the things they are learning are needed for the future activity, to come through in peace as well as in a possible war, the greater is the influence of the studies on the entire personality development.

Once again the principle is confirmed: Nothing is more useful for the practice than a good theory, as solid intellectual qualifications, because the cadres thus are being soundly prepared for the future requirements of the field service. In this connection we support all efforts aimed at concretely familiarizing the officer candidates with the practice of service life, to provide them as early as possible with a manifold insight into the different aspects of their future activity.

We welcome it greatly that the responsible comrades in the commands as well as at schools devote themselves with special care to the structuring of practical training. In fact what is involved is an important section of political and military training specified in the curriculum and not least because, as the saying goes, as smooth a transition of the future officers from school to practical work is to be attained.

Third, all of us are asked to place greater importance on the implementation of the unity of rational and emotional factors. Undoubtedly everyone of us is aware that education takes place not only by means of the intellect but simultaneously always by means of feeling. The education of the feelings indeed is probably one of the most beautiful, but also most difficult tasks even though sometimes it does not yet succeed as well as some other things. Not without reason the ability to influence the feelings, to shape them and to let them mature, is called a great art.

Therefore it is part of the conceptional preparation of every training measure to look for suitable means and methods under this aspect, too. The general atmosphere in training is very significant for the education of the feelings. Much depends on how the teacher shows empathy, sure instinct, caution and patience. Only if instructor and trainee are wholeheartedly involved, they will jointly make the instruction into a lasting experience which also provides joy. The good and successful teacher knows how to present the training material so that enthusiasm and passion for the fulfillment of the tasks, deep love for the friend and relentless hatred for the enemy are aroused and appealed to.

Fourthly, determined efforts are required to attain a significant increase in the intensity of self-study.

Which way does our thinking go?

What is decisive is a demanding and interesting formulation which chalenges the complete commitment of the student, and so grips him that he cannot help himself but work on it until it is fulfilled, as stubbornly and as long as it is necessary for him.

From the first day it is important to do more to impart the technology of the intellectual work and to train endurance. The necessity to acquire knowledge independently, to read books and scientific periodicals regularly and to be always well informed about the current policy, that should become second nature to an officer.

There must be strict accounting of the study results, especially by high requirements in the classes, by the examinations and the diploma processes. The qualification for productive study is at the same time a decisive prerequisite for the possibility of the students and the candidates being directly included in research with their scientific work and of the teaching, of the entire intellectual work at the school being enriched by their active participation.

We need greater care and realism in planning the self-study. We need consistency and adherence to the plan if it is important to adhere to the available time and to make optimum use of it.

We are going to achieve the required lasting effects in education to the extent that we succeed to make headway with the effort of the party organizations and of all communists in the directions thus far indicated, to carry out the training as the main process at an institute of higher learning with even greater quality.

For Exemplary Socialist Relations Between Instructors and Students

Successes in communist education always depend essentially on the fact that the socialist relations are consciously and comprehensively developed as class relations. By that we mean to indicate an atmosphere which is characterized by common Marxist-Leninist positions, the unity of will and action in the fulfillment of orders, mutual respect, partisanship and loyalty to principles, friendly assistance and support, confidence and comradeship, integration and subordination in the collective. It is easy to fight under such conditions.

The way the officer candidates experience and help develop these relations, that is the way they will later act in the unit. In this connection, the joint striving of instructors and students for a genuine increase in performance in education and training attains special importance; a joint striving in which the students, guided by the skilled hand of the teacher, show constantly increasing activity, independence, and personal responsibility. It is a good thing to know that we are successfully progressing here. However, we do not overlook the fact that some candidates and students only insufficiently succeed in bringing in line political belief and personal attitude, that they show too little sense of responsibility in daily study behavior.

Of course the struggle for high performances makes great demands on the teaching staff. Its quality and composition, that has already been stressed by V.I. Lenin in his well known letter "To the Students of the School on Capri" "determines the (entire) direction of the course of instruction." Success of the educational work, indeed the entire reputation of a school, largely depends on the teaching staff.

In all sections and chairs, we have outstanding teachers who possess good qualifications as party functionaries, scientists and military specialists, are distinguished by a high intellectual-cultural level and consistently measure their activity by the requirements of the field force and of combat. The candidates see in them class comrades whose uncompromising attitude they respect, through whom they make the purpose in life of the communists their own and in whom they find models for their entire life. And we include here quite consciously our tested teachers at institutes of higher learning--including quite a few women.

What continues to be very important to us is the responsible selection and all-around qualification of the teaching staff members in the training units. Much depends on their daily association with the students. In addition, as military superiors they have to coordinate simultaneously the efforts of the various chairs. However, they themselves are frequently very young and have little experience. Therefore they are entitled to maximum attention so that they can keep on improving their ability to fill their place on the teaching staff enjoying equal rights.

And one more thing: The role of the teacher in the educational process and the joint striving for increased performance are always connected with grading. A criterion for that are the requirements of the programs and of the other military regulations. No more but also no less. To state it once again quite clearly, we favor conducting the struggle for very good and good grades on a broad basis in socialist competition, but exclusively in the sense that the corresponding quality of knowledge and ability, the achieved level of capabilities and skills of each individual find expression in this effort.

For a Sophisticated Intellectual-cultural Life

Communist education and self-education is deeply influenced by the intellectual-cultural life pulsating at the institutes of higher learning in its entire breadth characterized by the cultural conference. Increasingly the need to be involved with art and literature and the readiness to actively participate in the shaping of an interesting intellectual-cultural life develop--today at the institute of higher learning, tomorrow in the field forces and in the fleet. Completely in the spirit of our cultural conference there is serious striving to cultivate the wealth of ideas and feelings for our cause as well as the motivations for class-conscious military action with the help of art and culture.

Many teachers exemplify to the candidates and students how advice and strength for the fulfillment of the tasks can be drawn and must be drawn from the dialogue with the book, with the works of visual arts and music. In this connection, the diligent work of the comrades of the scientific libraries and the support by the GDR Military Publishing House, the NVA book and periodicals distribution department, the army museum and the military library of the GDR pays off.

We support the political departments of the officers academies in their thoughts and initiatives on the following questions:

--How does one achieve greater success in arousing interest in all by quality, diversity, variety, in awakening needs, in raising the direct responsibility of the officer candidates and students for the constant perfection of their cultural level and in achieving an active artistic activity of their own?

--How do we qualify the superiors, the FDJ managements and club councils to develop interesting and significant work in the company clubs?

Responsibility and Tasks of the Party Organizations and the FDJ

Communist education is a great challenge for the communists as it cannot be any other way. It decisively depends on the fighting strength of the party organizations how revolutionary spirit and political maturity, critical and self-critical attitude towards the fulfillment of the resolutions are supported in the collectives. Resourceful party work is at the same time the irreplaceable school of effective party education, the essential prerequisite for the personality development of our military cadres.

Exemplary basic organizations are struggling at the institutes of higher learning. These collectives and their managements have correctly understood the demand of the deputy minister and chief of the Political Main Administration, Comrade Col Gen Heinz Kessler, at the conference with party secretaries that, what is important is to energetically continue every training hour, every research effort" with "the strength of the party...the struggle for high quality and effectiveness." We are happy that the decisive impetus for that comes from the basic organizations of the teaching staff in which the most experienced communists function. With increasing success the efforts are directed towards

--broadly developing the scientific dispute to clarify ideological-theoretical questions and creating a headstart for the solution of matured problems;

--regularly critically assessing the personal share of each comrade in the results of education, training and research and conducting open discussions on that;

--supporting the young comrades in word and deed in the daily party work.

This support cannot be overrated. It significantly contributes to the officer candidates as young communists directly experiencing the power that the party can unfold as a fighting league of like-minded persons and how its leading role becomes a living reality every day. In line with the reference of the 13th Delegate Conference, we must be so stubborn in striving for higher quality of party education because "the unity and purity of the party, party discipline and revolutionary vigilance are gaining in importance" and in the future it will be more important than ever to "watch very carefully than no comrade strays from the Marxist-Leninist fundamental position, deviates from the party line." This also includes creating clear political conditions in the family and to create an atmosphere in which the children can mature as truly socialist personalities. Firmly rallied around the party organizations and as tested battle reserve, the FDJ bears great responsibility in the educational process. According to Order No. 50/84 of the Minister for National Defense "education and training and exemplary FDJ work must contribute to enabling the future superiors to implement the party's youth policy in the forces, to be based on the strength of the FDJ collective and to work themselves as youth functionary."

From the comrades in the teaching institutes we expect that this order is thoroughly studied and is immediately adopted in teaching as well as in the entire political life of the school. This requirement is all the more urgent because the order clearly and bindingly outlines important FDJ tasks for communist education. We are firmly convinced that the FDJ organizations are continuing a tested path in the "learning" combat mission. For this purpose we ought to provide direct help in the future, too, to the FDJ managements and activists to perform youth political-ideological work during the entire study time and during leisure time and to develop such valuable forms as argumentation competitions, club talks, circles, and sponsorship relations once again in a high-class and attractive manner. With all that, and that is no less important, especially our youth organization is able to arouse zestful vigor, enthusiasm, joy and cheerfulness.

In the preparation of this conference, the great responsibility and knowledge of the facts with which the political organs as leading party organs are devoting themselves to our institutes of higher learning became quite evident. At the side of the commanders and together with the staffs they perform strenuous work for conceptional leadership of long-term development processes in the military academy system as well as in the replenishment and qualification of the teaching staff. By the personal appearance of the leading comrades of the Political Main Administration, by careful guidance and control activity on the spot, it was possible to achieve that the political departments of the schools are increasingly applying themselves to raising the fighting strength of the basic organizations, party education as well as to the ideological-theoretical and pedagogic-methodological questions of the training process. The basic organizations now possess good experiences to analyze the conditions in their own area of responsibility and to make suitable decisions. This is reflected in the successful striving for the fulfillment of the fighting programs. In this connection we support the practice at the officers academies to approve only fighting programs in the basic organizations for tight leadership of the party and FDJ work in the training units and to properly concentrate the activities of the party organizations as well as the FDJ company organizations on the contribution of every individual for the fulfillment of these programs.

RELATIONSHIP OF DISCIPLINE, INITIATIVE EXAMINED

East Berlin PARTEIARBEITER in German Jan 85 pp 30-33

[Article by Col. Heinz Friedrich, 'Friedrich Engels' Military Academy: "Implement More Effectively the Strengthening of Central Command Authority!"]

[Text] The orientation of the 13th Party Delegate Conference on the constantly improving mastery of the "dialectic of growing centralization of command and absolute command authority on the one hand and necessary initiative, personal responsibility and independence of the subordinates on the other hand"[1] is in full accord with the demand of the Tenth SED Congress "to further raise the qualifications of the political leadership of the social processes by the party."[2]

In the efforts concerning the increasingly better theoretical and practical mastery of the general dialectical connection of leadership and initiative or of command and initiative under the present conditions, one has to start from the assumption that two trends will emerge more and more clearly in our armed forces because of the rapid scientific-technical development in indissoluble unity with social progress:

1. The growing division of labor and specialization, the profound changes in the combat tactics of the forces, the large areas covered by modern combat and the necessity for constant movement and decentralization and other factors give rise to a growing importance of a highly effective centralized troop command and in certain respects a growing centralization of command. Thus the ability and readiness of the commanders, the political and party workers and of the command organs are becoming more important for organizing the coordination of the forces in the most minute detail by issuance of precise orders and directing the will of hundreds, thousands and tens of thousands towards one target.

This trend of development is accompanied by changes that reach as far as the smallest military collective and must be taken into account if lasting progress in the leadership activity is to be achieved. Thus the possibilities of the commanders and command organs to determine in detail the actions of those under their command, to control the activities of the subordinates at a glance and thus to react immediately to changes in the position of the forces under their command tend to diminish.

Because of the multitude of the most varied military functions, it is no longer possible for the superior, to the degree it used to be years ago, to intervene in the work of his subordinates in a guiding, controlling and correcting manner with adequate expert knowledge, especially in the work of his specialists. The specialist is frequently on his own as regards his specialty. Others can advise him or replace him only up to a point. The superior increasingly depends on the advice and the action of the specialists. On the other hand, the specialist must--and that is a task of the superior--possess high political judgment and to an adequate extent must be familiar with the tactical situation, so that he can integrate his activity, e.g., on the equipment, in the bigger context and can fully understand his personal responsibility.

Under these circumstances the absolute reliability of the individual and of the entire collective and the strongly developed socialist relations between the superiors and the subordinates become a decisive factor of victory on the battlefield.

2. The leeway of the subordinates for independent decisions and actions in the interest of the best possible fulfillment of the commands and missions becomes greater. Thus the importance of initiative and personal responsibility of the subordinates and of course of the command forces increases at the same time.

It can be stated without any exaggeration that at no time in the nearly 29-year history of the NVA, soldiers acting full of initiative and aware of their responsibility were needed more than they are today. And the commander, political or party worker who wants to survive now and educate and qualify others for such action must himself be an exceedingly independent person, full of initiative and responsibile, must develop a consistently creative relationship to military activity and must strive for better solutions in the direction of raising combat effectiveness and readiness.

Both trends of development are dialectially connected. Thus the issuance of an exact command is a fundamental prerequisite for independent and responsible action full of initiative of the military personnel and border soldiers. On the other hand, fulfillment of the commands and missions today more than ever depends on the creativity and initiative of the subordinates.

Qualification of Issuing Commands of Growing Importance

In military practice it is important to consciously establish this unity. The strict military command regime and combining the personal responsibility of the individual leader with initiative and creativity however proves to be an exceedingly demanding task whose solution occasionally proceeds in a contradictory manner and confronts the party organizations with a series of complex requirements.

It is of special importance that the initiative of creative activity of the military personnel and the border soldiers are being fostered in every respect for the fulfillment of the tasks by the strength of the party organizations. In this connection conclusions concerning the further qualification for issuing commands are increasingly gaining in importance. To optimally combine orders and initiative in peacetime as well as in armed combat requires:

--to order as much as necessary for the fulfillment of the task and to give as much scope to the subordinate as possible;

--in details without urgency to decide and order no more than the knowledge of the situation permits;

--not to order more than can be accomplished in all probability.

In this connection it is extraordinarily useful for the superiors to thoroughly confer with the comrades of the subordinate leadership level, to be aware of their concerns and problems, to give them scope for thoughts of their own and help them to find the correct solution. Thus phenomena of tutelage and petty regimentation have no place. The inclination towards excess regimentation and management that still can be found in some places and is not related to the necessary strict centralism in command not only inhibits the initiative and creativity of the subordinates but also undermines their self-confidence. Tutelage, petty regimentation and similar phenomena can possibly get subordinates accustomed to acting only if appropriate orders come from above, for which there would be hell to pay especially in armed combat.

Create Clear Ideas on the Relationship of Discipline and Initiative

The mastery of the dialectic of command and initiative includes clear ideas on the relationship of military discipline and initiative. The task of first creating a clear point of view in this question among all communists is associated therewith for all party organizations.

The initiative of the socialist soldier for best possible fulfillment of the commands is a characteristic, an indispensable attribute of conscious military discipline. To put it another way: discipline of mere unthinking obedience, discipline without initiative contradicts the character of our social conditions and of our army and does not suffice for victory over the aggressor. Under present and future conditions victory can be achieved only with forces whose discipline is shaped by a maximum of initiative and personal responsibility. On the other hand, discipline is an important condition for initiative. Initiative must be related and subordinated to the task at hand, otherwise it loses its political and military value. Initiative for fulfillment of the orders, in the interest of implementing the idea of the superior, for strengthening the collective and for the development of the personality--only in this manner does initiative fulfill its purpose for ensuring high combat effectiveness and readiness. A decisive ideological foundation for that is the class attitude of the military personnel and the border soldiers towards command and obedience.

The combination of discipline and initiative is found to be a general requirement to the constraints of which not only socialist armed forces are subject. Development of the means and methods of armed combat as well as the pressure exerted by the superior social potentials of socialist armed forces have caused imperialist military for quite some time to reflect on the combination of discipline and initiative in training and in combat employment of their forces and to aim their educational practice towards that subject. There are objective limits to their efforts because of the social conditions. However, they are trying to compensate by manipulation and material corruption what is lacking in terms of prerequisites. The broadly developed system of competitions in the Bundeswehr is proof of that. With all system-related obstacles, we should not underestimate the potentials which the imperialist military possess to develop the initiative of the soldiers in the interest of the further increase in the capability for aggression. This, too, is a side that points out the dangerousness of the NATO armies.

Relationship of Military Individual Leadership and Democratic Centralism

Implementation of the demand for increasingly better mastery of the dialectic of centralsim in leadership, absolute command authority of the commanders and the initiative of the subordinates confronts the party organizations with a series of new ideological questions. This includes the question concerning the relationship of socialist military individual leadership and democratic centralism.

Since democratic centralism is the main principle of leadership in socialist society, it applies to all areas of society, thus also to the leadership in the socialist armed forces. In accordance with Soviet authors,[3] the following thesis is argued:

Centralized troop command, especially individual leadership as supreme principle of socialist troop command does not contradict democratic centralism but is one of its manifestations.

Because of the profound changes in socialist military affairs, the fulfillment of the class mission more than ever requires absolute and strictest unity of the will of the people, demands independence, initiative and personal responsibility in all areas of activity. "But how is it possible to ensure the strictest unity of the will? By subordinating the will of thousands to the will of one individual."[4]

With this realization party and state have equipped the individual leader in the NVA and in the GDR Border Troops with far-reaching powers. He has undivided command authority and has personal responsibility for development and the life of the subordinates, exact fulfillment of the tasks in peacetime and in armed combat as well as for effective use of the weapons and the combat equipment.

Full understanding for the individual leadership in the socialist armed forces must include Lenin's finding that centralism, understood in a truly democratic sense, assumes independence, initiative and personal responsibility.[5] To put it another way: Centralism in command, including leadership in the military area, is socialist only if it acts as democratic centralism, i.e. if--as in the case of individual leadership--undivided command authority and personal responsibility are combined with independence, initiative and powersonal responsibility of the subordinates. What is involved here is a dialectical unity, so that it can be stated: Without undivided command authority and personal responsibility of the individual leader, independence, initiative and personal responsibility of the subordinates can develop just as little in socialist military affairs as qualified issuance and execution of orders can be achieved without independent and responsible action full of initiative of the subordinates.

Deep theoretical insights into the connection of military individual leadership and democratic centralism are an important condition for further developing the political character of individual leadership. They are indispensable when it is important to understand and achieve troop command always and first of all as work with people. And they are also suitable to correct existing one-sided ideas of the meaning and purpose of the leadership activity. For example, that is the case when the leadership activity of the superiors is reduced to the short formula: To command means especially to issue orders and to make demands and to prevail with them in relation with the subordinates. With this very one-sided opinion the relations between superiors and subordinates basically are reduced to the right to issue orders and the duty to obey.

It appears justified to expand the past statements on individual leadership in the NVA and in the GDR Border Troops to the effect that what is involved here is the indissoluble connection of undivided command authority and personal responsibility of the individual leader with the independence and initiative of the subordinates. In this connection it should be emphasized that the principle of individual leadership becomes fully effective as an advantage of socialist armed forces if it is consistently understood and consciously realized as a form of implementing the leading role of the Marxist-Leninist party in the armed forces and as a form of democratic centralism. Thus it is stated at the same time that objective limits are set to the imperialist armies also in this respect, that they do not have such such a potential at their disposal.

For the further perfecting of the troop command it is necessary to view the tested military principle of individual leadership even more under the aspect of the changes that are taking place in socialist society and its armed forces. New and demanding requirements for the activity of the commanders, the political and party workers arise out of these changes. To master these requirements we possess strong potentials in the ideology of the working class, in the firm military alliance of the fraternal armies, in Marxist-Leninist military science, the socialist relations and in the class consciousness of the military personnel and the border soldiers.

FOOTNOTES

1. "From the Report of the Secretariat of the NVA Political Main Administration to the 13th Delegate Conference of the Party Organizations of the SED in the NVA and the GDR Border Troops." Rapporteur: Col Gen Heinz Kessler. In: PARTEIARBEITER, Special Issue, Mar 84, p 33.

2. "Report of the Central Committee of the Socialist Unity Party of Germany to the Tenth SED Congress." Rapporteur: Comrade Erich Honecker, Berlin 1981, p 136.

3. See "Military Theory and Military Practice," Berlin 1983, p 397.

4. V.I. Lenin, "The Next Tasks of the Soviet Power." In: "Works," Vol 27, Berlin 1960, p 259.

5. See V.I. Lenin, "Draft of the Article 'The Next Tasks of the Soviet Power'" In: Works," Vol 27, Berlin 1960, p 196 f.

U.S. NUCLEAR STRATEGY ASSESSED

East Berlin MILITAERWESEN in German Apr 82 pp 19-26

[Article by Lt. Gen. N. Petrov: "On the Nuclear Weapons Strategy of the United States;" from the Soviet military press]

[Text] The 26th CPSU Congress estimated that the reactionary imperialist forces in recent years have confronted the course of the USSR and of the other countries of the socialist community to contain the arms race, to strengthen peace and detente as well as to protect the sovereign rights and freedoms of the peoples with a peace-endangering policy of overarmament, threat and interference in other people's affairs, repression of the liberation struggle. Comrade L.I. Brezhnev, the general secretary of the CPSU Central Committee, pointed out in his report to the 26th Party Congress: "Adventurism, willingness to risk the vital interests of mankind for the sake of narrow, egoistical goals--that is especially openly expressed in the policy of the most aggressive circles of imperialism."[1]

Cloaked with the lie of the Soviet threat, U.S. politicians and military developed various theories and numerous strategic concepts, all of which do not stand up to serious criticism and are adventurist from top to bottom from a military point of view. One of Washington's latest creations in this field is the so-called new nuclear strategy.

Nature and Goal of Nuclear Strategy

The beginnings of the U.S. nuclear strategy include those criminal August days of 1945 when without any military necessity atom bombs were dropped on Hiroshima and Nagasaki. Their detonations, which entailed mass fatalities and destruction of unprecedented extent heralded the beginning of the nuclear age and the new U.S. strategy of "massive retaliation." In the opinion of U.S. General M. Taylor, this first U.S. nuclear strategy had the purpose of establishing a kind of "pax americana" in the world and of maintaining "order" in the entire world by means of the threat to use nuclear weapons. The strategy of "massive retaliation" was directed above all against the USSR, which was accused of "communist conspiracy" and of responsibility for the revolutionary changes occurring in the world. Immediately after World War II, the U.S. reactionary forces therefore started to pursue a policy of nuclear blackmail against the USSR. They prepared plans to unleash a war and repeatedly intended to invade the Soviet Union. Regardless of the different designations for the plans and the details of their contents--all of them contained the criminal idea to inflict a crushing defeat on the USSR by a surprise attack and to change the balance of power irreversibly in favor of the United States.

The U.S. nuclear weapons monopoly was broken at the end of the 40's. The Soviet Union, in the interest of its defense, was forced to develop nuclear weapons of its own within a short time. However, even after that Washington's nuclear weapons ambitions did not decline. The U.S. strategists continued to put their money on the superiority in nuclear weapons and on a strong strategic air force. They were supposed to be capable of destroying any objects unchecked on the territory of the Soviet Union. On the other hand, the U.S. strategists figured that the U.S. territory, on account of its great distance from the probable theaters of war, could hardly be reached by the carrier means of the nuclear weapons of that time and therefore was thought to be relatively invulnerable.

But things did not work out the way the imperialists had planned. The continuous growth of the power of the USSR and of the other countries of socialism, especially the development of the ICBM's and of a reliable system of air defense forced the U.S. leadership to recognize that its territory started to be reachable for Soviet missiles and that the strategic air force lost its former importance in a nuclear war. The strategy of "massive retaliation" reached a dead end.

With the strategy of "flexible response" (adopted at the beginning of the 60's), the U.S. leadership tried to find an alternative. The central position in this strategy was occupied--as before--by the general nuclear war and the preparation of the country and the armed forces for it. New was the "graduated" employment of nuclear weapons and the unleashing of limited wars. To conduct nuclear weapons war, the United States developed ICBM's at an accelerated rate. A concept was developed which provided for the possibility of a "controllable" war by a surprise nuclear strike for the exclusive annihilation of the enemy armed forces. The strategy of the limited preventive nuclear strike against the USSR was based on a numerical superiority of the United States in nuclear weapons delivery means.

Under the condition of the balanced ratio of forces in the strategic forces between the USSR and the United States, the Pentagon, however, was forced to abandon this concept. In April 1969, the then U.S. President R. Nixon stated in assessing the strategic arsenals of the United States and the USSR: "The difference has been evened up, it will never recur."[2]

But this new strategic reality, which constituted a good basis for the peaceful solution of complex international problems, was not understood by the U.S. ruling circles.

Only at the beginning of the 70's did the U.S. leadership officially recognize the parity, the balance in strategic weapons even though even in this case it did not want to be satisfied with the loss of superiority. A new strategy was developed in the Pentagon, the strategy of "realistic deterrence." It took into account the qualitative changes in the strategic weapons of the two sides and the increased vulnerability of the land-based ICBMs. The search for new possibilities to achieve nuclear weapons superiority over the USSR was continued. Great efforts were undertaken to perfect the third component of the strategic attack forces--sea-based ballistic missiles, development of the nuclear-propelled submarines as well as equipment of the land-based and sea-based strategic missiles with multiple warheads. Development of a new type of strategic nuclear weapons delivery system--the cruise missiles which can be launched in the air, at sea or on land--was started.

It appeared as if Washington wanted to end the policy of blackmail and of the preparation of a preventive war under the condition of the strategic nuclear parity. This all the more so since the U.S. Administration, after it had signed the Soviet-U.S. agreement on the prevention of a nuclear war, officially declared the unlawfulness of a nuclear conflict. Under the new conditions the Pentagon bet its money on superiority in the quality of the strategic nuclear forces. The goal was to achieve "guaranteed destruction" by a surprise nuclear attack on the USSR. The question arose: How is the "survival" of the United States to be ensured. The inevitability of a crushing retaliatory nuclear strike stood as an insurmountable obstacle in the path of the U.S. imperialists for world rule. To find processes acceptable to the United States of conducting a nuclear war which guarantee the destruction of the USSR as a viable society with minimal casualties of one's own, different variants of the war were and are being studied and calculations made of possible losses. In 1974 the strategic concept of "target selection" had been developed. It was based on the new weapons (IBCM "Minuteman 3," "Poseidon C-3" ballistic missiles, B-52G and B-52N aircraft, which carry "SRAM" guided air-to-ground missiles with nuclear warheads). With this concept, in addition to the general nuclear war, also a "limited nuclear war" was planned, i.e. that in addition to the unlimited use of strategic means against Soviet cities and other objects, a variant of their employment was prepared against "exclusively" military objects for the destruction of the military, especially the strategic nuclears potential of the USSR and to prevent a retaliatory strike. The ideas of the concept of "target selection," however, were not secured in financial respect because neither the potentials of the strategic weapons nor the potentials of the command and reconnaissance means fully corresponded to these requirements. The Pentagon was forced to shelve this concept temporarily.

On the Concept of Limited Nuclear War

In August 1980, the Carter Administration issued Directive No. 59, which formulates the use of the U.S. strategic nuclear forces in a war against the Soviet Union. It supplemented Directives Nos. 53 and 58 which designated the tasks for the preparation of the country for the case of a nuclear war.

Directive No. 59 orients towards a "limited nuclear war." The official version is described as follows: Under the conditions of the military balance, the threat to destroy Soviet cities is not sufficiently reliable to avert "Soviet aggression." Therefore the United States places its main emphasis on the preparation of its strategic nuclear forces for a preventive nuclear strike against a large complex of military-purpose objects of the USSR and of the other Warsaw Pact states to destroy their military potential, to deprive them of the potential to continue the war or at least to achieve maximum weakening of the retaliatory strike. This savage strategy--according to the sanctimonious declarations of their authors--allegedly is to counter the "threat of war" from the USSR and to strengthen peace. With the aid of this strategy the Pentagon figures, according to the statement by former Secretary of Defense H. Brown, to create an "imposing" threat for the Soviet Union, to frighten it, to demonstrate to it the existence of possibilities and plans in the United States to resort to nuclear weapons war at any time.[3] Thus the U.S. Administration was to increase the pressure on the USSR and to create a U.S. position of "superiority" in Soviet-U.S. relations, especially in the negotiations concerning the limitation of the strategic weapons. At the same time, the U.S. military power and strength is demonstrated to the other countries, its readiness to employ nuclear weapons if the USSR does not submit to the dictat of U.S. imperialism.

The idea is suggested to the world public that a limited nuclear war, in which allegedly only military objects of the sides (no residential areas) are to be involved and the population would suffer only a minimum of losses, is humane and under modern conditions is most likely to be acceptable and would permit avoiding the general nuclear war.

Conviction of a possible victory in such a war is expressed. A number of prerequisites are to be created to this end. The most important one is regarded to be the development of new, even more perfected nuclear weapons which are suitable for reliably destroying selected enemy objects. The present chief of the Pentagon, C. Weinberger, declared on 3 February 1981 that for the time being the United States does not possess sufficient weapons for a limited nuclear war. Therefore fulfillment of all military programs by the military-industrial complex cannot be postponed. He said that significant financial expenditures are necessary for this purpose but are unavoidable for the preparation of the material basis of the new nuclear strategy which in the future is to guarantee the leading role of the United States in the world.

The U.S. Administration demands from the other NATO countries that they support achievement of the guiding principles of the new strategy. It is suggested to them that the possibility cannot be excluded that the first nuclear strike against the socialist countries is conducted only with "European" nuclear weapons and the war can be limited to Europe. Therefore they should assure without objection the additional stationing of new U.S. intermediate range missiles in Europe, increase their annual military budgets and contribute to the stepped-up growth of the NATO potential as a whole. The consequences that such a nuclear war would have for the West European partners--that does not interest Washington. It is not necessary to be a military specialist to recognize the baselessness, the political adventurism and the extreme dangerousness of the new U.S. nuclear strategy. Under modern conditions it is untenable to bet on a preventive nuclear strike. The U.S. monopoly in nuclear weapons, especially also the superiority in strategic nuclear forces, has irrevocably disappeared. The military-strategic balance has become a reality of our time and the Soviet Union does not permit violating it. The situation has now fundamentally changed. To think today in the categories of the late 40's, only incompetent people who have lost a realistic idea of reality can do that.

It suffices to emphasize that with the characteristics of modern strategic nuclear forces, the systems of their management and the reconnaissance of the launching of missiles, it is impossible to conduct a preemptive nuclear strike without getting a less powerful retaliatory strike. Therefore the hopes of those are illusory who would like to find a "perfect" prescription for conducting the nuclear war in which it is possible at the most favorable moment to destroy the enemy without being destroyed in turn.

Neither the character nor the conduct of the nuclear war must be judged in a primitive manner. When the advisers to the U.S. President recommend a variant of the limited use of strategic nuclear weapons, then they propose in fact conducting nuclear war according to "rules previously prepared by someone, according to which the nuclear charges are to denote not over cities but over targets that Washington considers as suitable to declare as military objects. It is clear to any reasonably thinking person that this cannot be achieved in practice. Military objects are so placed that selected nuclear strikes against them would be accompanied by mass destruction of the civilian population.

On the whole, the attempt appears to be extremely naive to imagine the limited nuclear war to be the "exchange" of strikes against military objects "exclusively." Specialists of the U.S. Department of Defense prepared a report on the consequences of a "limited Nuclear war," which was presented at a hearing of the U.S. Senate Foreign Relations Committee. In this report the following information is provided on possible losses of the United States in case selected nuclear strikes are carried out on various targets of the country: Thus if a strike is conducted only on the Whiteman, Missouri, airbase, 10.3 million people can perish, and in a strike against other bases of ballistic missiles, 21.7 million people. It is not difficult to imagine how these losses would grow if all other important U.S. military objects are taken into consideration.

Thus only adventurers and liars are capable to assert that the limited use of nuclear weapons can save the world population from the horrors of Hiroshima and Nagasaki. From the military-strategic aspect, a "mini war" is--and that is obviously understood in the Pentagon--something absurd because it is obvious that a limited nuclear war requires that the aggressor launch hundreds of ballistic missiles. It is simply impossible to keep the target of their flight secret. A crushing retaliatory strike carried out with extreme force would be the inevitable consequence. In short, the "limited nuclear war" or the "knockout strike" is merely a cloak for global nuclear war for which the political adventurers of the imperialist world are preparing. Only disinformed people can believe that the strategists of the Pentagon and of NATO have abandoned their former course of preparing for a general nuclear war in favor of a "limited nuclear war" with strategic means--as allegedly less dangerous to the world and to humanity.

When Washington prepares for "limited nuclear war," it declares likewise that the variants for the use of the nuclear weapons produced thus far are not excluded but are supplemented by sufficient mobility and breadth of the spectrum of the military use of the strategic attack forces. In the opinion of the Pentagon, the own potential of the guaranteed destruction of the enemy is a component of the general strategy of deterrence; being deprived of it is unthinkable. The former chief of the Pentagon H. Brown at a meeting of the naval college in Newport on 20 August 1980 openly declared that "the new U.S. nuclear strategy requires the capability for selected use of the strategic nuclear forces and also conducting a total nuclear strike, i.e. on military objects as well as also on the entire spectrum of targets, including those of Soviet industry."[4]

The talk of the U.S. Administration of the "humanity" of its strategy, the "acceptability" of a limited nuclear war, is hypocrisy. Comrade L.I. Brezhnev in the report at the 26th Party Congress pointed out: "It is to be suggested to the people that a nuclear war can also be limited and they should reconcile themselves to the idea that such a war is permissible. But that is a direct deception of the peoples. A limited nuclear war according to U.S. ideas, e.g., in Europe, would right at the start signify the certain destruction of European civilization. But the United States itself would of course not escape the flames of war."[5]

The following is the true aim: A psychological climate is to be created in the United States for the "acceptability" of military conflicts with the use of nuclear weapons, the population is to be accustomed to the possibility and inevitability of a nuclear war, the will to resist U.S. imperialism is to be weakened among the nations and they are to resign themselves to overarmament. In our opinion, therein especially lies one of the biggest dangers of the new strategy for the U.S. population as well as also for all of mankind. If the cloak that has been placed over the new nuclear strategy and the fantasies about "curbing of Moscow" are pushed aside, it is not hard to understand that the new strategy by its nature constitutes a return to the strategy of "massive retaliation," an open call for preventive war, for the first strike against the Soviet Union. But it would be a mistake to regard it simply as a return to the past. The new nuclear strategy was developed as the result of the growth of the aggressiveness of U.S. imperialism and is based on new types of strategic weapons.

The dangerousness of the new U.S. nuclear strategy consists in the fact that the reactionary circles figure that they can convince the public of the necessity of the arms race.

The development of new nuclear weapons brings profits in the billions for the military-industrial complex. Let us recall:

--the development of new strategic missile-carrying aircraft, the production of cruise missiles of all types of basing,

--production and stationing of the U.S. intermediate range missiles in Europe,

--introduction of new expensive systems of command, communication and reconnaissance, new command posts and command centers.

The United States has a concrete program for the preparation of a qualitatively new material basis for preventive nuclear war. The White House starts from this basis and intends to disturb at any price, by all available means up to the threat of unleashing a nuclear war, the balance of forces that has developed in the world, to attain military superiority over the Soviet Union and then to dictate its terms from the position of strength.

The present U.S. Administration accelerates the development of all kinds of weapons. In this connection the emphasis is placed on offensive weapons which are earmarked for conducting the first strike.

In the report to the 26th Party Congress, Comrade L.I. Brezhnev underscored: "...in the development of military technology rapid and profound changes are taking place. Qualitatively new weapons are being developed, primarily weapons of mass destruction; weapons types which can make controlling them and consequently also their coordinated limitation exceedingly difficult if not completely impossible. A new stage of the arms race undermines international stability and considerably raises the danger of war."[6]

The United States Tries to Transform the European Continent Into a Main Theater of War

Washington includes the NATO partners in its aggressive plans. The decision of the British government concerning the replacement of the "Polaris" missiles by the "Trident 1" missiles and the approval of the neutron weapon are in agreement with the U.S. nuclear weapons strategy. Certain FRG politicians and military are also active advocates of the U.S. course to disturb the balance of forces that has developed in Europe to the advantage of NATO. The FRG territory even now actually constitutes a powerful nuclear weapons depot. According to Western information, at least 7000 nuclear charges and 80 percent of the nuclear weapons delivery means of the NATO ground forces are located in the FRG.[7] The FRG government has repeatedly expressed its willingness to station 108 "Pershing 2" missiles and 96 cruise missiles on its territory.

The White House persistently tries to transform the European continent into the main theater of war through the formation of a European nuclear weapons potential and the enlargement of the military potentials of the NATO countries and thus to avoid the retaliatory strike against U.S. territory. The former U.S. Secretary of State John F. Dulles advocated the idea. "The United States must possess the capability to conduct limited nuclear wars on the theater of war (in Europe) without triggering an unlimited nuclear war with its actions."[8]

Stationing of additional about 600 novel U.S. nuclear weapons delivery means in some countries of Western Europe is supposed to provide the West with a significant superiority over the Warsaw Pact countries with regard to intermediate-range nuclear weapons delivery means. It goes without saying that the Soviet Union will never permit that. Comrade L.I. Brezhnev declared: "We cannot leave unanswered the stationing of new U.S. nuclear missiles aimed at the USSR and its allies. In this case we shall be compelled to consider additional defense measures. If it has to be, we are going to find optional means to protect our vital interests."[9]

These new missiles constitute strategic weapons in the view of the Soviet Union. Their purpose is not Europe's defense but conducting strikes on vital objects located in the European part of the USSR. In this manner the United States expects to significantly reduce the possibilities of the Soviet Union with regard to its retaliatory actions to the aggression. After all, the "Pershing 2" missiles can reach their targets within 4-6 minutes after launching. But that changes the strategic military balance and increases the threat to the Soviet Union. The main aim of the United States is military superiority over the USSR and not concern about Europe's security. On the contrary, with the stationing of new intermediate-range missile weapons, the danger of war for Europe grows enormously. The peoples of Western Europe are being transformed into a kind of hostage of the U.S. nuclear strategy.

From the start of the development of the nuclear weapons, the United States was guided by a strategy of "massive retaliation." It was modernized, revised and its designation changed but its nature was maintained. Its foundation was always formed by the preemptive strike and constant readiness for unlimited use of nuclear weapons. Only one feature differentiates each stage of development of this misanthropic strategy: The qualitative perfecting of the means of mass destruction makes them increasingly more dangerous for civilization.

Ever since the United States has had nuclear weapons, it has never dissociated itself from using them, not to speak of declaring its readiness to renounce first use of nuclear weapons. On the contrary, it was repeatedly poised at the threshold of using them. Numerous U.S. politicians and military have threatened with employment of nuclear weapons in crisis situations. The leaders of the present U.S. Administration also favored this course. C. Weinberger openly stated during his appearance on TV on 8 March 1981 that the United States will not stop at the use of military force in the solution of international problems, including the application of nuclear weapons. With great concern the world public recently heard another irresponsible statement by U.S. Secretary of State Haig that "there are more important matters than peace." Behind these statements there are concrete war plans which are directed against the USSR and its allies, there is the expansionist and hegemonist policy of the reactionary imperialist circles. It would be a mistake on the part of the peace-loving states to underestimate these militarist statements. They must use all opportunities to curb the nuclear weapons lunatics. The forces of peace are headed by the mighty Soviet Union and the Unified Armed Forces of the Countries of the Socialist Community, which cannot be intimidated. Completely without prospects for success are also the U.S. attempts to negotiate with the Soviet Union from the "position of strength." All military adventurers should remember that the love for peace of the socialist countries must not be taken as a sign of weakness. The states of the socialist community possess everything to reliably protect their peoples. Marshal of the Soviet Union D.F. Ustinov, member of the Politburo of the CPSU Central Committee and USSR defense minister stated: "The Soviet army and the navy are actually constantly prepared to repel the attack of any aggressor regardless of the means and methods of warfare he may use. Retaliation for an attack on the Soviet Union and the other countries of the socialist community will be inevitable."[10]

The USSR has never threatened to attack any country or group of countries. Preventive wars and wars of conquest of any kind are alien to Soviet military doctrine. "The Soviet Union has always been a convinced opponent of such concepts and will remain so. Our efforts are directed towards not letting either a first or a second strike happen, they are directed towards not letting any nuclear war at all happen. Our view in these questions can be formulated as follows: The defense potential of the Soviet Union must be big enough so that nobody dares disturb our peaceful life. Our policy is aimed not at superiority in armament but at its reduction, at the cutback of military confrontation."[11]

FOOTNOTES

1. "26th CPSU Congress. Report of the CPSU Central Committee and the Next Tasks of the Party in Domestic and Foreign Policy." Rapporteur: L.I. Brezhnev, Berlin 1981, p 29.

2. "The Nixon Doctrine," Moscow 1972, p 57 (Russian).

3. See THE NEW YORK TIMES, New York, 11 Aug 80.

4. THE WASHINGTON POST, Washington, 21 Aug 80.

5. 26th CPSU Congress..., p 29 f.

6. Ibid., p 36 f.

7. See DER STERN, Hamburg, 19 Feb 81.

8. J.F. Dulles, "Speech for Dollar World Council," Washington, 27 Oct 57, p 246.

9. PRAVDA, Moscow, 23 May 81.

10. PRAVDA, Moscow, 25 Oct 79.

11. L.I. Brezhnev, "On Lenin's Path," Vol 6, Berlin 1979, p 323 f.

MANEUVERABILITY AS FACTOR IN AERIAL COMBAT REVIEWED

East Berlin MILITAERWESEN in German Apr 82 pp 36-40

[Article by Col. W. Thonke: "Aerial Combat Involving Great Maneuverability in Modern Aerial Combat"]

[Text] Aerial combat involving a rich variety of maneuvers was a typical phenomenon in World War II. Following World War II, as combat aircraft with qualitatively new combat characteristics became available, this picture appeared to be undergoing a change. Many military authorities in the United States and in the other capitalist nations felt that aerial combat between modern high-speed aircraft involving maneuvers was impossible. According to their opinion, modern aerial combat, during which aircraft were automatically vectored toward bombers, was exclusively program-characteristic.[1]

U.S. aggression in Vietnam and the wars in the Middle East, however, taught the imperialist air war theoreticians something different. Aerial combat involving large groups of aircraft always dissolve into individual engagements which involve maneuvering. This is a specific law of the combat action involving fighter aircraft.[2] Consequently, the maneuvering dogfight has retained its firm place in modern aerial combat. This is to be proven in the following work.

Content and Character of Modern Aerial Combat

Aerial combat is defined as "the armed battle by individual aircraft (helicopters) or groups (units, arms of service) which combines fire and maneuver in the destruction of the enemy or to defend against his attacks. Aerial combat is a main type of combat for fighter aircraft in the battle for air supremacy".[3] The essential distinguishing characteristics of aerial combat are the time of day, the weather conditions, the flight altitude and speed, the ratio of forces in the air, the control conditions, the character of the enemy counterpressure, the type of target and the type of weaponry used.

Aerial combat, in which either side is striving to fulfill its combat mission, must be conducted with determination, with the exertion of all moral, psychological and physical forces at the disposal of the pilots. Its successful conclusion is dependent on many factors, primarily on the following:

a. the political-moral, military specialist, psychological and physical qualities of flying personnel;

b. the status of tactical and flight training, as well as the combat experience of pilots;

c. the combat characteristics of the aircraft of both sides, as well as a knowledge of the tactics and equipment at the disposal of the enemy and the skillful utilization of his weaknesses.

"No split personality is suitable for aerial combat training. The stress requires a whole comrade, his will, his energy, his powers of persuasion".[4]

The fundamental content of aerial combat includes the maneuver and firepower. Through maneuvering the fighter pilot adopts the position with respect to the enemy from which he can use his weapons or he creates conditions for other fighter pilots to take up such a position. Toward this purpose, fighter pilots maneuver according to altitude, speed and direction.

Local wars and experiences from combat training show that in intercepting an aerial target without executing course maneuvers aerial combat at low altitudes can take place at speeds of between 1,300 and 1,400 km/hr; at great altitudes, speeds of up to Mach 2 or more are involved. Under such conditions, the flight status of a fighter aircraft is characterized by a high level of kinetic energy ($F_G \cdot [V^2/2g]$) and by a high level of potential energy ($F_G \cdot H$). The total mechanical energy of the aircraft then exceeds the kinetic (speed-dependent) and substantially exceeds the potential (altitude-dependent) components:

$$W = F_G \cdot H + F_G \cdot (V^2/2g).$$

For modern aerial combat this means a lower value with respect to altitude as compared to speed. This tendency increases with rising air speed. In practical terms, this means that for a certain increase in speed more altitude is required the greater the starting speed is. This phenomenon is explained on the basis of the flight speed which lies within the second power. The relationships involved in the transformation of kinetic energy into potential energy are the same. Table 1 lists the altitude gain for selected Mach numbers which can be attained at the expense of a loss in velocity of ΔV = 100 km/hr.

Table 1. Altitude Gain at the Expense of Velocity Loss of ΔV = 100 km/hr for Selected Mach Numbers

Mach number	0.7	1.0	1.5	2.0
Altitude gain in meters	600	850	1,250	1,700

From this it follows, for example, that in a surprise encounter of a non-maneuvering aerial target the rapid increase in velocity involving the use of the afterburner along the predetermined acceleration path and pulling up to the enemy's altitude--where desirable at maximum vertical velocity and involving minor course corrections--is the main type of maneuver.

In actions against aerial targets in the forward hemisphere the fighter aircraft maneuver, once the enemy has been spotted, generally consists in reducing velocity to a tactically advantageous value and in banking toward the enemy. If, in addition, altitude needs to be gained, this can be accomplished at the expense of velocity.

If surprise was not achieved and the enemy attempts to evade the attack through maneuvering, the fighter aircraft must execute pursuit maneuvers. Aerial combat against fighter aircraft which are evading the attack in order to themselves adopt a suitable position for an attack is particularly characterized by heavy maneuvering. In aerial combat of this type the fighter aircraft maneuver at maximum angular velocities.

Modern fighter aircraft reach their maximum angular velocities at all altitudes at around Mach 0.8. If the aerial combat begins at other flight speeds, pilots of both sides will be attempting to reach velocities in the region of Mach 0.6 to Mach 1.0. This region circumscribes the limits for the main zone of maneuverability factors involved in aerial combat for fighter aircraft. Theoretical investigations, flight tests and the experiences from local wars confirm this. Thus, for example, Western military authorities estimate that:

"Sharp-witted analysts have made a surprising discovery: despite more than 100,000 engagements of Mach 2 aircraft in the skies over North Vietnam,

"a. not a single second of aerial combat at speeds of Mach 1.8 or higher was recorded,

"b. aerial combat at velocities of more than Mach 1.6 were only recorded by the second,

"c. only minutes of aerial combat were recorded having taken place at velocities of Mach 1.4 or higher,

"d. relatively rarely was aerial combat conducted at speeds of Mach 1.2 or higher (several hours recorded).

"The predominant portion of all military engagements and aerial combat took place at air speeds of less than Mach 1.2 and at altitudes of less than 6,000 meters!"[5]

At velocities of around Mach 0.8 fighter pilots can maneuver without loss of energy in level flight utilizing the maximum safe load factor. If necessary, forced curves, using the aerodynamically available safe load factor, are executed. This is particularly useful where a velocity advantage exists with respect to the target.

The upper limit of the principal zone of aerial combat involving maneuvers is the result of visibility conditions. It is assumed that a maneuvering target cannot be identified at a distance greater than 4 km. The upper limit of the principal zone of aerial combat involving maneuver is, thus, as a rule, the altitude at which aircraft must utilize the maximum safe load factor in executing horizontal curves having a radius of around 2 km. If the aerial combat is initiated at a greater altitude, the curve radii are greater and, in many cases, visual contact is then lost. The fighter pilot must be once more vectored toward the aerial target.

These determinations agree with the experiences from combat actions in Vietnam and in the Middle East. The majority of aerial combat engagements involving maneuver were conducted in the space between extremely low altitudes and altitudes of around 10,000 meters. In the air war in Vietnam the survivability of U.S. F-4 "Phantom" aircraft was less than that of the light and highly maneuverable Vietnamese fighter aircraft of Soviet design with respect to his principal criteria for conducting aerial warfare. The better aerodynamic characteristics on the Vietnamese fighter aircraft, their ability to perform a supersonic leap during the attack by using air-to-air missiles, as well as the flight mastery and courage of the pilots acted favorably in their behalf in gaining tactical superiority in aerial combat. Even the military authorities of NATO themselves had to admit this. Contrary to their expectations, group aerial combat involving much maneuvering developed between supersonic aircraft. These engagements were conducted at subsonic speeds and primarily at medium altitudes because this permitted the fastest possible banking toward the aerial opponent.[6]

Thus, aerial combat involving maneuvers is, as a rule, not conducted in the entire altitude-speed area commanded by fighter aircraft but in that portion of the area which offers the best maneuverability conditions. Flight personnel must, therefore, be precisely familiar with the maneuverability characteristics of their own and of the enemy aircraft (the elements of superiority) and must be in a position to select the most suitable types of maneuver, taking altitude and speed into account.

While firing at the enemy, fighter pilots continue their maneuver along trajectories which facilitate aiming and the use of the most effective weapons. A timely and properly executed maneuver makes it possible to deploy long-distance rockets from a suitable position, to be followed by short-range rockets and, finally, by using the on-board cannon.

Aerial combat involving fighter aircraft which have new types of guided missiles and new sighting systems can be conducted from all directions. It receives a qualitatively new content. Nevertheless, the altered combat characteristics of aerial weapons only change aerial combat tactics; they do not overthrow them fundamentally.

The fundamental legitimacies of the deployment of fighter aircraft of previous generations in aerial combat can be described as follows:

a. weapons were exclusively employed from the rear hemisphere of the enemy,

b. at the instant of firing, only relatively small critical load factors of the target and the fighter aircraft were permissible,

c. the banking of the enemy in the direction of the attacking fighter aircraft generally led to the "forcing out of the firing zone."

New types of guides missiles and fire control devices create qualitatively new opportunities for aerial combat. In this respect:

a. a rocket strike can be conducted against the enemy from any direction,

b. the firing distance is significantly greater than the visual distance to the target,

c. a pursuit maneuver on the part of the target does not in every case lead to a breaking off of the attack (the target can be attacked from any direction).

Rockets for close-in aerial combat increase the firepower of fighter aircraft in aerial combat involving maneuvers considerably.

The Role of Aerial Combat Involving Much Maneuvering in Modern Air Warfare

As mentioned earlier, until the beginning of the air attacks against Vietnam the U.S. military authorities considered programmed intercept flights, which contain standardized phases, as the principal form of aerial combat. "The real situation over North Vietnam, however, presented another picture.... The aerial tactics learned by the air gangsters and involving a straight-line approach from the rea of a target which did not maneuver much, and a velocity advantage, as well as a subsequent breaking off proved to be an illusion in view of the courageously attacking Vietnamese comrades.... The American Air Force leadership had to recognize, and seize this as decisive today, that modern aerial combat requires pilots to have such dexterities as rapid reaction time, a good status of training in higher aerobatics and in spatial orientation, as well as the capability to withstand high load factors during flight."[7]

In the opinion of Western military specialists, aerial combat can be conducted at short range, middle range or long range. The determining factors are the visual observation capabilities of the pilot, the performance parameters of the on-board radar and the range of the aircraft armament.

Aerial combat at short range (close-in combat) is to be conducted with on-board cannon or air-to-air rockets (for example, AIM-9 "Sidewinder," AIM-82A "Agile," R-550 "Magic") against visually recognized targets. In aerial combat at medium range the air target is followed by the on-board radar sight. Destructive means include, among others, the AIM-7 "Sparrow" guided missile or the R-530 "Super Matra" missile. Aerial combat at great range is said to be possible with the use of AIM-54A "Phoenix" rockets (range up to 150 km).

The concept of great range is considered to be the area in excess of 50 km. Medium range involves an area between 5 to 50 km. If the distance shrinks to the limits of visibility, then the pilot must switch over to close-in aerial combat (combat involving maneuvering).[8] In recent times, several NATO military authorities have expressed the opinion that the introduction of modern aircraft and the use of all-round rockets represent the cornerstone of the end of classical forms of aerial combat. They feel that the aircraft as well as pilots have reached the limits of their possibilities to conduct aerial combat involving maneuvers. The immediate future of aerial combat would be increasingly dictated by electronics and by armaments and the fighter aircraft would thus be playing the role of a flying platform to transport the all-round directional weapons to the air target.

In this connection, however, it must be pointed out that the F-16 "Fighting Falcon" aircraft, the introduction of which was begun in the U.S. Air Force and some NATO countries as well as Israel, is specifically designed for close-in combat. The fact that NATO military authorities, in working out tactics of aerial combat for the 1980's, are relying in equal measure on new as well as old elements of aerial combat tactics is unmistakable.[9]

The introduction of third-generation aircraft and various new types of rockets in the socialist armed forces presents military researchers with manifold tasks, the solutions of which are being purposefully worked on. One result is the division of actions involved in aerial combat by fighter aircraft into two phases:

a. aerial combat at great range (long-distance combat) as well as

b. aerial combat at medium and short range (close-in or maneuver-type aerial combat).

Scientific and technical progress exerts an influence on the development of tactics through the combat characteristics of aircraft and armaments. Thus, for example, the principles for the succession use of weapons have been further developed. With the introduction of rockets of various ranges it was possible to perfect the employment of aircraft weapons which are dependent upon the approach of the enemy to friendly orders of battle in the sequence long-range rockets, medium-range rockets and maneuver-type aerial combat at short range involving air-to-air missiles and the on-board cannon.

The tendency which indicates that aerial combat by large groups of aircraft tends to dissolve into individual engagements having maneuver characteristics is strengthened under modern conditions. Accordingly, a one-sided evaluation of the altitude and speed characteristics of a fighter aircraft is not correct. Moreover, under these conditions, the maneuverability characteristics and the effective use of the optimum weapons variants for a given air situation gain in importance. So as to be able to completely utilize the maneuverability characteristics of his fighter aircraft to the limiting parameters, the pilot must, for example, know the stationary and nonstationary critical load factor of various maneuvers or the available thrust margin and abe able to apply this knowledge in combat.

Moreover, the maneuvering character of aerial combat compels the planning and rapid application of a previously worked out variant of aerial combat. The capability of the commander to lead the aircraft group in the air is of great significance because the order of battle in aerial combat is generally spread out and the flights as well as squadrons must act outside of the limits of visual contact. Maneuver-type aerial combat has also increased the significance of cannon armaments and has led to the development of special air-to-air missiles particularly suited for aerial combat involving lots of maneuvering.

The indicated tendencies permit the final conclusion that a maneuvering-type close-in aerial combat involving the use of short-range weapons, is also a realistic phenomenon for fighter aircraft of the new generation. Attack and defense maneuvers involving tight radii and high critical-load factors are absolutely essential in obtaining a tactical advantage during an attack or in minimizing vulnerability during defense maneuvers--also in consideration of the improved tactical-technical parameters of air-to-air rockets which are to be anticipated.

Aerial combat involving much maneuvering (close-in aerial combat) is characterized, with few exceptions, by the tactical procedures of older-generation aircraft. The attack using long-range air-to-air rockets against approaching aircraft requires special tactical procedures but does not change the tactical fundamentals of aerial combat.

FOOTNOTES

1. G. Dollwetzel/J. Knie, "Developmental Tendencies of NATO Air Forces From the Tactical Viewpoint," MILITAERWESEN, No 4, 1981, pp 86ff.

2. W. Demmer/J. Klopfer, "The Tactics of the Branch of Service as Scientific Theory From the Point of View of Fighter Aircraft Forces," MILITAERWESEN, No 10, 1981, p 40.

3. "Sowjetische Militaerenzyklopaedie" [Soviet Military Encyclopedia], selection, No 4, Berlihn, 1978, p 26.

4. VOLKSARMEE, Berlin, No 48, 1980.

5. P. Spey, "Mach 2--Reality or Myth?" INTERNATIONALE WEHRREVUE, Geneva, No 8, 1980, p 1210.

6. V. Bobitsch, "V polskoch novoi taktiki," KRASNAYA ZVEZDA, Moscow, No 140, 1980.

7. V. Bobitsch, "On the Conduct of Aerial Warfare of the United States in Southeast Asia," MILITAERWESEN, Issue B, No 4, 1974, p 109.

8. I. Tschebotaryev, "Aerial Combat at Medium Range," MILITAERWESEN, No 8, 1977, p 70.

9. V. Bobitsch, "v polskoch novoi taktiki."

FLIGHT CHARACTERISTICS OF COMBAT AIRCRAFT EXAMINED

East Berlin MILITAERWESEN in German Apr 82 pp 41-49

[Article by Col. Dr. S. Meindl: "On the Relationship of Combat Characteristics of Combat Aircraft--Combat Capabilities of Fighter Forces/Air Defense Forces"]

[Text] In the article entitled "The Tactics of the Arm of Service as Scientific Theory",[1] the tasks involved in the tactics used by air defense fighter aircraft forces were formulated. In addition to an analysis of the essence and the regularity of modern combat involving fighter aircraft forces partial missions involved in air defense fighter tactics were defined as follows, among others:

a. The investigation of the influence exerted by the combat characteristics of weapons and command and control facilities upon the methods of combat actions and the execution of combat (aerial combat) by fighter aircraft;

b. The evaluation of anticipated actions and tactical procedures used by enemy air forces and of the combat characteristics of their weapons;

c. The determination of combat possibilities for fighter aircraft units and troop units and the working out of suitable methods for their evaluation;

d. The analysis of the processes which are part and parcel of the preparation of troop units for combat action.

Close reciprocity exists between these partial missions. Thus, the third assignment can only be realized if the results of the first two are in hand; and recommendations for combat training can only be forthcoming if the first three tasks are at least partially solved.

Reciprocity between the combat characteristics of weapons and the combat opportunities of both sides are of special significance. After all, the goal of the investigations involved in all four partial tasks is, in the final analysis, the effort to exhaust our own capabilities to the maximum and achieve maximum combat effectiveness as early as the stage during which we train for combat. Consequently, it is necessary to make a closer examination of the reciprocity between the combat characteristics of combat aircraft and the combat capabilities and to draw final conclusions from this examination with regard to combat training.

The following analyses of the relationship between weapons and combat capabilities and the basic final conclusions derived from them have general validity and are also usable with respect to other arms of service.

Combat Characteristics of Combat Aircraft

The combat characteristics of a combat aircraft are the individual and joint qualities which exert substantial influence upon its suitability as a weapons system to solve a combat mission in terms of space, time and effectivity. They are described for the partial systems of the combat aircraft (carrier system, weapons system and equipment) as well as with respect to its overall qualities (complex combat characteristics). The essential combat characteristics of the combat aircraft are depicted in Figure 1.

Combat characteristics are objectively part of the combat aircraft--of weapons in general--irrespective of whether man recognizes them and is or is not in a position to utilize them. They are, to a certain extent, the embodiment of requirements made of a combat aircraft by the designer and by the industry. During testing at the manufacturing plant, during troop testing and during utilization of the combat aircraft, the objectively present combat characteristics are ever more recognized. They are defined as recognized combat characteristics. They are the combat characteristics which are reflected in the consciousness of man, which find expression in regulations, descriptions, methodological instructions, etc., and which are constantly being perfected. In other words, the cognitive status is subject to constant change, particularly with respect to today's modern combat aircraft.

The recognized combat characteristics are described quantitatively by specifications. They contain data in the form of individual items of information or tables and their dependence on the principal conditions and influence factors is depicted by such characteristics as area descriptions, diagrams and graphics.

However, recognition of combat characteristics does not automatically affect their practical utilization. This requires a certain status of training on the part of all individuals involved in the combat employment of combat aircraft. The recognized combat characteristics will only become usable and effective in the fulfillment of a combat mission through the abilities and dexterities, through the status of training of commanders, flight controllers and pilots. Usable combat characteristics are based on the status of training which has been attained with respect to theory and practice. They are set forth during planning of the combat engagement (the aerial combat) and substantially influence the combat capabilities. It is not only necessary to know the combat characteristics. They must also be theoretically and practically mastered in order to make maximum use of them during combat.

25X1

Fig. 1. Essential combat characteristics of a combat aircraft.

Key:
1. Combat characteristics
2. Carrier
3. Weapons
4. Equipment
5. Action area by altitude (H) and velocity (v)
6. Action area by H and v
7. Maneuvering characteristics
8. Locator sector of on-board weapons
9. Range of stable radio contacts
10. Climb and glide characteristics; range and flight duration; take-off and landing characteristics; stability and steerability
11. Firing area of various weaons; destructive effect on typical targets
12. Range of automated control, navigation and landing systems; effective range of electronic warfare weapons
13. Complex combat characteristics
14. Suitability for action by time of day and weather conditions, ceiling, suitability for hedge-hopping; automatic target selection and target engagement; reliability; maintenance behavior

The relationship between usable and recognized combat characteristics is frequently expressed as the degree of combat aircraft mastery--of mastery of equipment in general.

The practical utilization of the combat characteristics is limited in peacetime combat training for various reasons (for example, for security reasons, for reasons of economic aspects). For example, this is true for:

a. supersonic flights at low or medium altitudes,

b. training involving time-optimal climb profiles,

c. firing involving all types of rockets at various targets under various conditions, particularly involving approaching targets,

d. utilization of certain features of radar facilities, etc.

Consequently, the theoretical acquisition of knowledge regarding combat characteristics plays an extremely important role. It determines, particularly at the beginning of a war, the usable combat characteristics and, through them, the combat opportunities to a great extent.

The deep study of documentation in which the combat characteristics of opposing specific combat equipment are described, as well as procedures such as the graphic-dynamic simulation of combat actions, modeling of aerial combat and comparative evaluation of combat characteristics, is of particular significance with respect to the theoretical acquisition of knowledge.

The combat characteristics realized in combat can differ positively or negatively from the usable combat characteristics. This is caused by such factors as combat morale, psychological and physical performance strength, the courage and will of the pilot, but also by situation conditions which can prevent utilization of the combat characteristics.

The topics discussed thus far are depicted in Figure 2. To show the combat characteristics, a radial diagram was created. Each ray symbolizes a certain combat characteristic. The recognized, usable and realized combat characteristics are placed in context with respect to the objectively present ones. They yield a certain relative magnitude which is then plotted on the appropriate ray. By connecting the individual points, flat areas which describe the gain or loss which is determined by the status of knowledge, the status of training and by other factors. Figure 2 clearly shows that: the higher the status of knowledge or the status of training, the more comprehensive can be the use made of the combat characteristics. Thus, the increasing of the status of knowledge and the status of training is the constant priority assignment of all personnel participating in fighter aircraft combat.

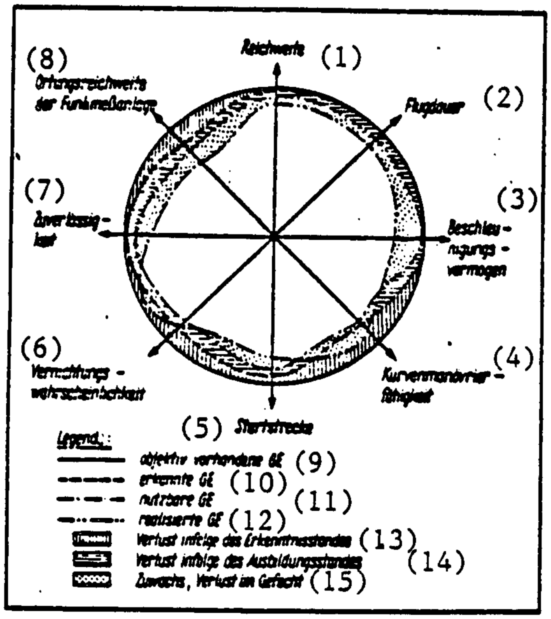


Fig. 2. Ratio of combat characteristics to one another.

Key:

1. Range
2. Flight duration
3. Acceleration capability
4. Banking maneuverability
5. Take-off distance
6. Destruction probability
7. Reliability
8. Range of radar facility
9. Objectively present combat characteristics
10. Recognized combat characteristics
11. Usable combat characteristics
12. Realized combat characteristics
13. Loss caused by status of knowledge
14. Loss caused by status of training
15. Gain, loss in combat

Combat Capabilities of Fighter Aircraft Troop Components and Units

Combat capabilities of fighter aircraft troop components and units down to the individual fighter aircraft are their possibilities of fulfilling a specific combat assignment within the time ordered under specific situation conditions. They are characterized by factors which describe the anticipated results of the combat action (of the combat flight), as well as the area and time of action accomplishment. These factors influence each other and are always tied to a certain totality of the situation conditions.

The combat capabilities are objectively given. Figure 3 shows their dependence upon the most essential factors. It can be seen that with respect to a body of troops which has adequate personnel having a desirable level of political and moral condition and status of training, an organization which has well-trained commanders as well as a concrete organizational structure and appropriate quantities of materiel, the combat opportunities are primarily dependent on the (probable) character of enemy actions, on the situation conditions, on the quality (the combat characteristics) and quantity of weapons and equipment, as well as on the degree to which it is mastered by the personnel on hand. Similarly, the character of enemy actions is strongly influenced by the quality and quantity of his weapons and equipment. The situation conditions (for example, the jamming picture) can act as a limiting factor on the degree to which combat characteristics can be utilized.

Combat capabilities can be calculated by different methods for specific enemy action variants and fixed situation conditions. In practice, where the computation results are used in the quantitative justification of the decision and in the planning of aerial combat, this occurs with respect to a limited number of selected variants. A selection of variants which are based on evaluation of the situation is extremely complicated. It is, however, an inescapable prerequisite for determining the combat capabilities.

25X1

Fig. 3. On the dependence of combat capabilities on essential factors

Key:
1. Political-moral condition and status of combat training of personnel
2. Quantity and quality of armament and equipment as well as degree of mastery of personnel
3. Abilities of the commander corps in troop leadership
4. Combat opportunity of fighter aircraft troop component or unit
5. Organizational structure of the troop component/unit
6. Guarantee of materiel supplies
7. Character of enemy action
8. Situation conditions

The need to compute combat capabilities for various situation is given not only by the relatively uncertain character of enemy actions. It also results from the fact that determination of the data involving combat capabilities requires the allowance of exact conditions and conditions areas. The goal of evaluating the situation must, in other words, include the determination of conditions or conditions for which combat capabilities are to be calculated. Since the calculation of combat opportunities

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requires, in part, extremely exact data, it provides feedback to the evaluation of the situation and renders it more specific. If the conditions have been determined, the space, time and effectiveness data can also be determined. This is to be demonstrated with a few simplified examples.

The Dependence of Space and Time Values Upon Combat Characteristics

The possible action area of a fighter aircraft squadron HRm is determined by the fuel-energy and kinematic limitations. The former are identical with the tactical action radius. They may be computed from the fuel supply, the flight altitude and speed and the armaments variant.

Kinematic limitations are determined in accordance with the fighter control equation. They are identical with the possible insertion sectors EAm, that is to say with the maximum distance from the airfield or from the ready zone in the air from which the fighter aircraft is to be inserted into the combat action.

If insertion takes place from take-off readiness at the airfield, the basic equation looks as follows:

$$S_{EA_m} = \frac{D_{Ort} - v_Z(t_{pass} + t_{Start} + t_{Steig} + t_B + t_{Kurve}) + n(S_{Steig} + S_B + S_{Kurve})}{1+n} \qquad (1)$$

in which SEA_m--the distance of the possible insertion sector from the take-off field,

D_{Ort}--location distance of target from airfield,

v_Z--target velocity,

t_{pass}--the time interval from the moment the target is located until takeoff,

S_{Steig}, t_{Steig}--the trajectory or time required to climb to required altitude,

S_B, t_B--the trajectory or time required to attain terminal velocity,

S_{Kurve}, t_{Kurve}--the trajectory or time requires for the banking maneuver,

$n = v_Z/v_J$--the ratio of target velocity to fighter aircraft velocity in level flight (prior to acceleration).

Beginning with the basic fighter control equation, the influence of combat characteristics can be easily analyzed.

The location distance is primarily dependent on altitude and the effective reflection surface of the target. The possibility of flying at low altitudes is determined, among others, by the number of aircraft in the group, as well as by their stability and their steerability and the equipment on board the combat aircraft. If the combat aircraft are equipped for hedgehopping, they can fly at extremely low altitudes. Then the location distances will also be very low.

Target velocity is primarily dependent on the armaments variant, the number of aircraft in the group, flight altitude, as well as stability and steerability. With the growth of auxiliary weapons and the practice of carrying auxiliary fuel tanks, the permissible velocities are significantly reduced. The maximum velocities of a group target are limited by the velocities of the aircraft in the assault group. A reduction in velocity means an increase in the SEAm. Passive time t_{pass} can be depicted as follows:

$$t_{pass} = t_E + t_{Anl} + t_{Rollen} \qquad (2)$$

in which t_E--time of decision by commander,

t_{ANl}--time of engine arts,

t_{Rollen}--time of aircraft taxi to take-off and landing runway.

Passive time is substantially influenced by the starting behavior of the power plant and the time required for taxiing. The latter is determined by the permitted taxi speed, which is, in turn, dependent upon the armaments variant.

Given the decentralized location of fighter aircraft, the t_{Rollen} component can consume several minutes. Excessive passive times prevent the insertion of aircraft from the readiness zone at the airfield but, rather, force the insertion from the readiness area in the air where fighter aircraft must be maintained in readiness zones in anticipation of the arrival of the enemy. However, this is only possible for a limited time. Reduced passive times increase the SEAm in all cases.

The time and trajectory of the climb are determined by the climb characteristics of the fighter aircraft. Whereas increasing values of S_{Steig} cause increases in SEAm, lower values of t_{Steig} bring this about. A reduction in t_{Steig} values through higher vertical velocities, however, leads to smaller S_{Steig} values.

These relationships yield optimum climb profiles for fighter aircraft which describe the purposeful flight and climb velocities in their dependence upon altitude.

The time and trajectory for accelerating to the required final velocity are determined by the acceleration capabilities of the fighter aircraft. A reduced acceleration time increases the SEAm values; the distance required to achieve this velocity plays a role particularly in combating fast-flying targets at great altitudes and in the stratosphere.

The time and distance needed to fly the critical curve depend primarily on the type of means of destruction being employed as well as on the flight speed and maneuverability of the fighter aircraft. If the means of destruction being fired permit an engagement from all directions, the critical curve disappears, that is to say $t_{Kurve} = 0$. The SEAm values can rise considerably. If, on the other hand, it is necessary to reach a position in the rear hemisphere of the target, a curve of approximately 180° must be flown. Then, the following values will apply:

$$t_{Kurve} = \frac{r \cdot \pi}{v_{JE}} \qquad (3)$$

in which r—the radius of the curve,

VJE--final velocity of fighter aircraft after acceleration.

From the formula it can be seen that with a growing VJE value, the time for flying the curve diminishes and SEAm is thus increased. In actual fact, however, t_{Kurve} rises. Because:

$$r = \frac{v^2_{JE}}{g\sqrt{n^2_{yJ} - 1}} \qquad (4)$$

and thus

$$t_{Kurve} = \frac{v_{JE} \cdot \pi}{g\sqrt{n^2_{yJ} - 1}} \qquad (5)$$

in which g--ground acceleration,

nyJ--critical load factor of the fighter aircraft.

The maneuverability characteristics of the fighter aircraft, which are expressed here by the value of nyJ, are also dependent upon the flight speed. An increase in nyJ results in a rise in the SEAm value in any case.

The possible final velocity of the fighter aircraft is dependent upon the armaments variant and, thus, upon the permissible flight speed, as well as on possible or permissible critical load factors nyJ. With a few exceptions, it should be greater than the target speed so as to permit an approach to the target after the engagement curve has been completed. All of this makes it necessary, in selecting the final velocity, to arrive at a compromise between all noted requirements and the utilization of the combat characteristics. In actual practice, purposeful final velocities or approach velocities ($V_{JE} - v_Z$) and curve radii or tangents are listed in dependence upon target altitudes and target speeds.

The velocity ratio, when it decreases, yields higher SEAm values according to the basic equation of fighter aircraft control. However, it should be noted that this relationship, particularly at low altitudes, can only be reduced to a limited extent, since the speed of the fighter aircraft is objectively limited and excessive speeds lead to large curve radii and, thus, to long curve flying times.

The Dependence of Effectiveness Data on Combat Characteristics

The effectiveness of combat actions engaged in by fighter aircraft can be described through the mathematical anticipation of the number of air targets destroyed. It is tied to a previously determined time frame and to a specific area of combat engagement. Greatly simplified, it can be depicted as follows:

$$M_Z = \sum_{i=1}^{m_E} P_{Ai} \tag{6}$$

in which M_Z--the mathematical expectation of the number of air targets destroyed,

m_E--the number of possible action factors in a given period of time,

PA_i--the intercept probability of a single or group target.

The intercept probability can be determined as follows:

$$P_{Ai} = P_{Hi} \cdot P_{Orti} \cdot P_{Anqri} \cdot W_i \cdot K_{Zi} \tag{7}$$

in which PH_i--the probability of being vectored toward the n-th air target,

$POrt_i$--the probability that the n-th air target will be located by the fighter aircraft (group),

$PAngr_i$--the probability that after locating, the approach, the attack and the application of means of destruction can take place,

W_i--the kill probability of the target through the means of destruction used, taking their reliability into consideration,

KZ_i--the reliability of the work of all means participating in the combat flight.

Formulas (6) and (7) visibly show the manner in which the effectiveness of the combat engagement by fighter aircraft forces depends on the combat characteristics of the combat aircraft.

The number of possible action factors in a given time frame is primarily determined by the number of available fighter aircraft, control channels, etc. With combat actions lasting a longer time, however, the maintenance status of the fighter aircraft, characterized by the time required to prepare for repeated takeoff, exerts an influence. This time is, in turn, dependent on the armaments variant which has been ordered (for example, with or without auxiliary fuel tanks).

When using the "independent air target search and destroy mode" the number of possible action factors is also dependent upon the flight duration and the locator sector of on-board equipment. As both these values increase, the probability that the target will be located and an action can take place at all rises.

The probability of being vectored to the target is dependent, among other factors, on the types of missiles used (the firing area), on the locator sector of on-board devices, on the maneuverability characteristics of the fighter aircraft, as well as on the availability of an automated fighter aircraft control system and its range.

Larger firing areas, larger locator sectors, better maneuverability and the advantages of an automated fighter aircraft control system increase the probability of successful vectoring. When the equipment includes omnidirectional rockets, long-range radar sights and automated fighter aircraft control systems, the probability value is practically one. This does not apply when the fighter aircraft (group) must be vectored into a narrow sector in the rear hemisphere of the target.

The probability of locating the air target by the fighter aircraft (the group) depends on the locator sector of the applied reconnaissance means which can change considerably, depending on visibility conditions (in the case of visual acquisition), on altitude stacking with respect to the target and on the actual flight altitude. The division of attention by sector and the slewing possibilities of the locator sector of on-board radar equipment, play an important role for a fighter aircraft group if the on-board radar equipment is jammed, the locator sector can change considerably with a transition to visual search for the target. The greater the locator zone, the greater the probability that the target will be located.

The probability of making an approach and an attack depends on the maneuverability characteristics of the fighter aircraft and the air target, particularly in a maneuver-type air battle. In addition, the firing sector (depending on the types of means of destruction used) and the permissible firing critical load factor exert a great influence. If the fighter aircraft is superior in maneuvering capabilities and if it has means of destruction at its disposal which have a great firing sector and a great firing critical load factor, the probability of accomplishing an attack is increased significantly, given the fact that other conditions remain equal.

The target kill probability depends primarily on the type and number of means of destruction employed, as well as on the type of target involved. For modern air-to-air missiles, the kill probability of any air targets is very high, even where sharply-maneuvering air targets are involved. With older type missiles, the probability depends on the maneuvering characteristics of the target and of the fighter aircraft.

The reliability of the functioning of all means participating in the combat flight is determined experimentally. It can be augmented by doubling a number of means. In addition to the analyzed influences, the combat characteristics exert an influence via still other factors upon the combat capabilities.

Such factors are, for example, the developing forces ratio in the air, the use of types of aircraft and modifications in groups having diverse tactical missions, the starting situation of friendly forces, etc.

The dependence of the combat opportunities upon the combat characteristics of combat aircraft of both sides can be quantitatively described. A depiction in general form is shown in Figure 4.

Fig. 4. On the dependence of combat opportunities upon combat characteristics.

Key:
1. Combat opportunities, for example, ...
2. Objectively present
3. Recognized
4. Actual
5. Usable
6. Combat characteristics (qualities)
7. Dependent upon status of knowledge
8. Dependent upon status of training
9. Dependent upon combat mission, political moral condition, the degree to which the enemy can be expected to act, etc.

Man Is the Dominant Factor

It must be emphasized that the value of $M_Z = f(GE)$ can shift up or down depending on the status of knowledge and training, the leadership qualities of the command structure, the degree of probability of enemy actions, etc. In order to achieve a shift in the positive direction, a precise and detailed evaluation of the situation is required. An important factor is as accurate an evaluation and comparision of combat characteristics of the combat aircraft involved as possible. The solution of this task creates an essential prerequisite for the maximum utilization of combat opportunities. To utilize them to the fullest means:

a. the purposeful employment of aircraft types modifications,

b. selection of purposeful armaments variations,

c. the selection of purposeful flight altitudes and velocities in the ready zone and search zone,

d. the selection of purposeful procedures for effecting the approach and the employment of means of destruction,

e. the determination of purposeful starting positions in the air and on the ground,

f. the determination of desirable forces ratios in the air battle, etc.

All of this is unthinkable without a concrete knowledge of the combat characteristics of the combat aircraft and requires long-term preparation. The better and more comprehensively the commander, the aircraft controller and the pilot are familiar with the combat characteristics, the more purposeful will be the decisions they will be able to take and the better will be their situation with respect to utilizing all combat capabilities.

The reciprocal relationship between combat characteristics and combat capabilities are realized in combat and in preparation for combat via man. He is and remains the dominant factor in combat. His role is constantly growing. To purposefully employ third-generation fighter aircraft with improved and partially completely new highly automated combat characteristics under combat conditions and to utilize the increased combat opportunities requires all participants in the combat to demonstrate a high degree of knowledge and ability.[2] After all, better combat characteristics do not automatically lead to higher combat opportunities for units, troop components and formations. To utilize them means constant elevation of the training status of personnel, both in theory and in practice.

In addition to requirements for aerial combat training, added significance is primarily ascribed to the knowledge of combat characteristics, aerial combat theory and fighter aircraft forces tactics. Even though modern aircraft technology partially simplifies a solution of the above tasks, it simultaneously brings with it new and multiple opportunities which expand the listed tasks and make their fulfillment more complicated. For example, the increasing number of various air-to-air missiles increases the possibilities of combat employment significantly; however, it simultaneously renders the selection of purposeful armaments variations more complicated, since their multiplicity has increased. The increased maneuvering characteristics of fighter aircraft lie beyond the tolerance limitations of the pilot today. In conjunction with modern aircraft armament, this leads to new ways of conducting aerial combat and, thus, to better combat capabilities. They also place higher demands upon the pilot.

At the beginning of the article, it was made clear that a number of combat characteristics are simply not useful under peacetime conditions. This means that the practical determination and evaluation of combat capabilities is limited. It must proceed primarily on a theoretical base. Simultaneously, in part as a result of reciprocal conditions between combat characteristics and combat capabilities, tactics as a scientific theory in the preparation of troops for combat takes on increasing significance.

All of this makes it necessary to elevate theoretical training in fighter aircraft troop components and units to a higher level in order to master the requirements of modern combat technology and to utilize the greater combat capabilities resulting from it. The constant development of modern aircraft technology--of our own as well as of the enemy's--its qualitatively new combat characteristics, change fighter aircraft tactics and the character of aerial combat. Consequently, the evaluation of combat characteristics in troop training is not a one-time task but one which must be posed repeatedly. It requires the working out of the necessary information documentation in fighter aircraft troop components and units or making it available. The vigorous support of this task is the mission of all scientific and educational facilities of the NVA, of all specialized cadres in troop units and staff of the air force and air defense forces. The estimation and evaluation of certain combat characteristics requires deep and comprehensive analyses by specialists in various specialties. Cooperation in scientific work on the part of all who deal with problems of combat employment of fighter aircraft forces weighs very heavily in this regard.

FOOTNOTES

1. W. Demmer/J. Klopfer, "Tactics of Arms of Service as Scientific Theory When Viewed From the Standpoint of Fighter Aircraft Forces," MILITAERWESEN, No 10, 1981, pp 35ff.

2. See also L. Moros, "Der Flugzeugfuehrer und der moderne Krieg" [The Pilot and Modern War], Berlin, 1980.

CHINA'S MISSILE DEVELOPMENT PROGRAM EVALUATED

East Berlin MILITAERWESEN in German Apr 82 pp 86-89

[Article by Lt. Col. A. Kruger, 'Ernst Thaelmann' Officer's College: "China's Nuclear Missile Potential"]

[Text] In May 1980 the newspapers reported that the People's Republic of China had confirmed that it had launched several intercontinental ballistic missiles between 18 and 21 May. The tests were said to have met with full success. The test series was concluded. For observers of China's military policy this report was not unexpected. After all, it is known that China has been developing and producing rockets since the 1960's and introduced them in its arsenal. By the time the above-mentioned tests were reported China had already launched earth satellites with its own carrier rockets and had selected cosmonauts for manned space flights.

In no other area of military science do the ambitious hegemonistic and far-reaching goals of the Beijing leaders come to light more clearly than with respect to nuclear rocket armaments. Given its intention to become a first-rate world power by the year 2000, the Chinese strategic nuclear weapons are suited to still further exacerbate the dangers faced by world peace which emanate from imperialism and which are already considerable. These armaments are taking on an increasing influence with respect to Beijing foreign policy. Through ownership of such weapons this policy becomes still less calculable and more adventurous. As Comrade L.I. Brezhnev said at the 26th CPSU Party Congress, Chinese foreign policy "continues now as before to be attuned to the sharpening of the international situation and is allying itself with the policy of imperialism.... The readiness of the United States, Japan and some NATO nations to expand military policy relationships with China conceals a simple calculation designed to utilize the enmity of China vis-a-vis the Soviet Union and the socialist community of states for their own imperialistic interests. What a risky game!"[1]

Chinese armament is also dangerous because the Beijing leadership is not held to any kind of moderation or reticence with respect to strategic nuclear weapons by any international treaties. The above-mentioned tests are the temporary conclusion of a development which began some three decades ago and is being promoted by the Beijing leadership purposefully with the aid and utilization of Western technology.

The Evolution of the Views of the Beijing Leadership With Respect to Nuclear Weapons

The views of the Chinese leadership regarding the development of nuclear missiles have become fundamentally changed: from no to yes regarding their development! In this process one can discern three stages:

The first stage (1945-1953) was characterized by an underestimation of the significance of nuclear weapons. Thus, Mao Zedong stated in an interview with American journalist A. Strong: "The nuclear bomb is a paper tiger with which the Americans reactionaries frighten the people. It looks dreadful but in fact this is not so."

The second stage (from the end of the Korean War to the beginning of the 1960's) is characterized by a change in the relationship between the Chinese leaders and nuclear weapons. Chinese military theoreticians conceded that with the advent of nuclear and rocket-nuclear weapons military science had entered a new developmental phase. The Chinese leaders began to forge their own nuclear weapons forces. In 1953 the Chinese Academy of Sciences established a Committee for Nuclear Energy. A scant 2 years later the country had 36 laboratories for nuclear research and 1958 saw the activation of a large nuclear reactor. In 1960 the first rocket was launched.

At the beginning of the 1960's the third stage began. Beginning in the spring of 1962 uranium-235 was obtained through gas diffusion at Lanzhou. Some 6,000 specialists were brought in to develop nuclear weapons. The Chinese leaders first pursued the following goals with their nuclear armaments efforts: raising of the international prestige of China, realization of their own big power chauvinist ambitions and nuclear blackmail. From the beginning they had plans for the employment of nuclear weapons. What is characteristic is that as early as 1961, long before the testing of the first Chinese nuclear bomb, the Military Council of the Central Committee of the Communist Party of China emphasized: in combat training ... from the regimental level upward ... the employment principles for nuclear and chemical weapons must be studied and clear determinations must be made how we can utilize the results of a surprise strike with our own nuclear and chemical weapons."[2] The nuclear weapons industry was the only industrial branch which was untouched by the Cultural Revolution in the 1960's. On the contrary, it experienced a strong development during this period. China proceeded very systematically in this area. It developed its first atomic bomb in 1964, its first hydrogen bomb in 1967 and launched the first earth satellite in 1970. Currently, when one does not count the Soviet Union, China is the only power in Asia which has nuclear weapons forces.[3]

The Development of Nuclear Weapons

According to the foreign press, China currently has the basis necessary for the production of nuclear rocket weapons. It has a complete complex of enterprises for the extraction and beneficiation of nuclear raw materials, for the production of nuclear explosives (uranium-235 and plutonium-239), for the assembly of nuclear munitions and for their testing. China has uranium ore deposits. The total reserves of uranium ore in China amount to more than 300 million tons. More than 50 percent are ores with a high uranium content (0.1 to 0.2 percent). China also has large deposits of lithium which is necessary for the production of hydrogen bombs. China is operating 12 nuclear reactors, 14 particle accelerators, 12 plants for the enrichment and processing of nuclear materials and at least 4 plants for the production of nuclear explosives as well as the assembly of nuclear charges. The overall production capacities of the Chinese nuclear industry amount to 70 nuclear charges per year. By 1976 China had approximately 2,500 kg of enriched uranium-235 and some 1,500 kg of plutonium-239, an accumulation which is sufficient to produce some 400 nuclear charges with a yield of 20 kilotons through 3 megatons.

Nuclear weapons tests are conducted at the testing site in the area of Lake Lopnor. The first nuclear test took place on 16 October 1964. The strength of the detonation amounted to 20 kilotons. On 27 October 1966 a medium-range rocket carried a nuclear charge of 20 kilotons to its target. The rocket was launched from the desert of Takla-Makan over a distance of some 1,000 km. From June 1967 through October 1970 four hydrogen bomb detonations with yields of up to 3 megatons were undertaken. On 17 November an experiment involved a warhead with a 4-megaton yield.

It is informative that China required only 3 years to make the transition from atom bombs to hydrogen bombs, whereas France required 13 years and the United States 7 years for this purpose. Beijing is also currently working on the perfection of its nuclear weapons and its carrier vehicles. The Beijing leaders demonstratively declined to join the treaty covering the prohibition of nuclear weapons tests in the three media. Despite the protests of many countries Beijing is continuing the dangerous nuclear detonations in the atmosphere. By 1980 China had already made 25 nuclear weapons tests with a detonation strength of 5 kilotons through 3 megatons. There is also the intention to develop their own neutron bomb. Foreign specialists estimate that China currently possesses more than 700 nuclear weapons with a yield of 20 kilotons through 4 megatons, of which 150 are tactical in nature. The most important plans for nuclear weapons are located in Beijing, Baodu, Shenyang, Xi'an and Chongjio.

Development of Nuclear Weapons Carriers

The Chinese leaders are devoting great attention to the development of carriers for nuclear weapons. Among others, work is progressing on the creation of an artillery system for the firing of nuclear ammunition.

The principal nuclear weapons carriers are rockets. China has a production base for the manufacture of components and for the assembly of ballistic rockets of different types. At the beginning of the 1960's China concluded the development of strategic ballistic liquid-fuel rockets of the first generation and began their production. From 1964 through 1972 medium-range (1,100 through 2,000 km) single-stage liquid-fuel ballistic rockets were being produced. These rockets were introduced into the arsenal effective 1966. The warhead consisted of a nuclear charge of 20 kilotons. The rocket complexes were produced as stationary or mobile variants. Preparation for launch required 36 hours and the mean probable hit deviation was 4 km.

In the 1970's China developed two new types of liquid fuel ballistic missiles: a single-stage medium-range (2,400 to 3,500 km) liquid-fuel ballistic missile with a 1-megaton warhead and a two-stage expanded range (4,800 to 5,600 km) liquid-fuel ballistic rocket, which was sometimes designated as an intercontinental ballistic missile of limited range. At the end of the 1960's and at the beginning of the 1970's the nuclear rocket weapons forces were established in China, in 1977 these forces had more than 70 ballistic rockets of medium and expanded range of the second generation which were equipped with nuclear warheads having a yield of 1 megaton with some having yields of up to 3 megatons. Added to this are some 100 rocket weapons systems of the first generation which were developed by 1970.

According to estimates of U.S. specialists, the combat zone of the Chinese medium-range first-generation rockets includes the eastern portion of the territory of the USSR, Japan and also the U.S. military bases in the Far East. Medium-range second-generation rockets are in the position to combat targets located in central and east Asia. The introduction of intercontinental ballistic missiles (range up to 13,000 km) will make it possible to include all countries of Europe and the Americas in the combat radius of Chinese nuclear rocket forces.

Chinese rocket troops, which are a separate arm of service today, have mixed armaments. These consist of tactical, operational-tactical and strategic rockets. The basic unit in the rocket troops is the rocket detachment which is equipped with ground-to-ground rockets (range up to 100 km) consisting of three batteries with four to six launchers each. Three batteries are also organic to the detachments which include 300- to 500-km rockets in their arsenal. Every battery has a launching ramp, detachments which are armed with rockets having a range of 1,500 to 3,000 km have one or two batteries with a launching ramp in each. In addition to the fire batteries, transport, engineer and other support units are part of the rocket detachment. Rocket troop units also contain detachments for instrumentation and radar reconnaissance.

In May 1980 the People's Republic of China tested intercontinental ballistic missiles designated CSS-X-4.

Chinese plans give much space to the development of atomic submarines which are equipped with rockets. The Chinese space program is also characterized by a military bent. According to foreign forecasts, China is in the position of creating an intercontinental ballistic missile with a multiple warhead (multiple individually targetable reentry vehicles) in the period between 1981 and 1985.

In addition to its rockets, China has aircraft as nuclear weapons carriers. These are primarily nuclear weapons carriers of strategic and operational-tactical designation. Since 1970 a medium bomber, designated the B-6, is produced in China which can be used as a nuclear weapons carrier. The aircraft has the following parameters: maximum velocity, 950 km/hr; range, some 6,600 km (tactical radius up to 2,300 km); bomb load, 8 tons. China has approximately 100 aircraft of this type, of which 65 to 80 can be prepared to carry nuclear weapons. The light B-5 bomber aircraft can be used as an operational-tactical nuclear weapons carrier. Some 300 aircraft of this type are in the hands of the Chinese Air Force. A portion of them can be prepared to carry nuclear weapons. For the same purposes China can use about 74 F-8 fighter planes and also some 300 F-9 fighter-bombers. The F-12 fighter-bomber aircraft was also said to have been developed for nuclear weapons employment; its series production was planned to begin in 1980.

The network of rocket bases is being expanded. The ground-to-ground medium-range rockets are deployed in more than 10 locations, the ground-to-ship rockets of the coastal artillery are located at 20 bases, large- and intercontinental-range missiles are located at more than 10 bases. Guided antiaircraft rockets are located at 98 bases. Army field depots for nuclear munitions were also developed. There is a special transport sector which deals with the covert transfer of nuclear materials by rail, by air and by water.[4]

The most important strategic nuclear weapons base in China is located in the mountains of Tibet--some 320 km north of Lhasa in the mountain region of Naqu, 4,600 meters above sea level. This location has good meteorological conditions and is protected against radar reconnaissance. Some 2,000 well-educated experts are employed, among others, at Naqu in the manufacture of atomic bombs, in preparing experimental rocket launchers and in the area of early warning systems. The base at Naqu currently has 70 CSS-1 (range 950 km) ballistic missiles and 20 CSS-2 (range 2,400 km) rockets. In Tibet there is also a launch center for CSS-2 ballistic missiles (in the region of Anouche) and an atomic research center (in the area of Gamo). The Naqu base has a capacity to destroy around 33 cities and dozens of locations in the Far East. The action radius of the Chinese rockets at Naqu includes New Delhi and 20 other Indian cities, as well as 12 Mongolian cities.

Beijing will also be increasing its nuclear weapons potential at a more rapid pace in the future. Under the umbrella of the "four modernizations" a forced arming is proceeding. Forty percent of the state budget in China is expended for military purposes. Over the next 5-10 years the Beijing leaders intend to expand the tactical nuclear forces as well as to equip army corps and divisions with nuclear weapons.

FOOTNOTES

1. 26th CPSU Congress. "Accountability Report of the Central Committee of the CPSU and Future Tasks of the Party in Domestic and Foreign Policy;" L.I. Brezhnev, Berlin, 1981, p 16.

2. Gorbachev, "The Nuclear Weapons Ambitions of Beijing," KRASNAYA ZVEZDA, 25 January 1981.

3. VIETNAM COURIER, Hanoi, No 1, 1980, p 4 (English).

4. B. Gorbachev, "Under the Slogan of Modernization," KRASNAYA ZVEZDA, 11 July 1980.